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(54) Title: ANTIGENIC PEPTIDES, SUCH AS FOR G PROTEIN-COUPLED RECEPTORS (GPCRS), ANTIBODIES THERETO, AND SYSTEMS FOR IDENTIFYING SUCH ANTIGENIC PEPTIDES

(57) Abstract: The present invention provides antigenic peptides for GPCRs and antibodies relating thereto, and related systems, methods, compositions, and the like, such as diagnostics and medicaments. Where antibodies against a given GPCR are not known, the present invention provides such antibodies, and preferred antigenic sequences for producing such antibodies. Where antibodies against a given GPCR are known, the present invention provides preferred antigenic peptides for producing antibodies that exhibit improved specificity, affinity or capacity to perform antibody-related actions relative to the known antibodies.

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ANTIGENIC PEPTIDES, SUCH AS FOR G PROTEIN-COUPLED RECEPTORS (GPCRS), ANTIBODIES THERETO, AND SYSTEMS FOR IDENTIFYING SUCH ANTIGENIC PEPTIDES

CROSS-REFERENCE TO RELATED APPLICATIONS

[1] The present application claims priority from United States provisional patent application No. 60/257,144, filed December 19, 2000 and presently pending.

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[2] The following is a Table of Contents to assist review of the present application:

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ANTIBODY PREP - POLYCLONAL:

ANTIBODY PREP – ADJUVANTS (ALL ABS):

(ii) Monoclonal Antibodies

ANTIBODY PREP - MONOCLONAL:

MOABS - COMBINATORIAL:

HUMANIZED MOAB:

ANTIBODY SUBSTITUTIONS - NON-IMMUNOGLOBULIN POLYPEPTIDES (ALL ABS):

CHIMERICS:

ANTIBODY LABELING (ALL ABS):

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ANTIBODY FRAGMENTS:

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BISPECIFIC ANTIBODIES GENERALLY:

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ANTIBODIES - CROSS-LINKED OR "HETEROCONJUGATE":

ANTIBODIES - DIABODIES:

ANTIBODIES - OTHER:

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BEFORE LPHIC:

LPHIC:

POST LPHIC:

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[3]

BACKGROUND

[4] G protein-coupled receptors (GPCRs) are a large group of proteins that transmit signals across cell membranes. In general terms, GPCRs function somewhat like doorbells. When a molecule outside the cell contacts the GPCR (pushes the doorbell), the GPCR changes its shape and activates "G proteins" inside the cell (similar to the doorbell causing the bell to ring inside the house, which in turn causes people inside to answer the door). GPCRs are like high-security doorbells because each GPCR responds to only one specific kind of signaling molecule (called its "endogenous ligand"), kind of like a high-tech door lock that responds to only one fingerprint. Part of the GPCR is located outside the cell (the "extracellular domain"), part spans the cell's membrane (the "transmembrane domain"), and part is located inside the cell (the "intracellular domain"). Thus, GPCRs are embedded in the outer membrane of a cell and recognize and bind certain signaling molecules that are present in the spaces surrounding the cell. GPCRs are used by cells to keep an eye on the cells' own activity and on the environment. In organisms that have many cells, the cells use GPCRs to talk to each other.

[5] GPCRs are important to the pharmaceutical industry and other industries. For example, many drugs, including some antibody-based drugs, act by binding to specific GPCRs and initiating or inhibiting their intracellular actions, and diagnostics and therapeutics based on GPCRs or on antibodies for GPCRs are becoming increasingly important.

[6] General concepts about GPCRs are discussed in more scientific terms in the following paragraphs.

[7] The GPCR superfamily has at least 250 members, Strader et al., FASEB J., 9:745-754 (1995); Strader et al., Annu. Rev. Biochem., 63:101-32 (1994). GPCRs play important

roles in diverse cellular processes including cell proliferation and differentiation, leukocyte migration in response to inflammation, gene transcription, vision (the rhodopsins), smell (the olfactory receptors), neurotransmission (muscarinic acetylcholine, dopamine, and adrenergic receptors), and hormonal response (luteinizing hormone and thyroid-stimulating hormone receptors). Strader et al., *supra*; U.S. Patent nos. 5,994,097 and 6,063,596. Many important drugs produce their therapeutic actions through their interaction with GPCRs.

[8] Nucleotide and amino acid sequences for many GPCRs have been reported and can be found in public databases such as GenBank and GenPept. Generally speaking, different GPCRs show both structural and sequence similarities. The most conserved domains of GPCRs are the transmembrane domains and the first two cytoplasmic loops. GPCRs range in size from under 400 to over 1000 amino acids. Coughlin, S. R., Curr. Opin. Cell Biol. 6:191-197 (1994). They contain seven hydrophobic transmembrane regions that span the cellular membrane and form a bundle of antiparallel alpha helices. McKee K.K., *supra*. The bundle of helices forming the transmembrane regions provide many structural and functional features of the receptor. In most cases, the bundle of helices form a pocket that binds a signaling molecule. However, when the binding site accommodates larger molecules, the extracellular N-terminal segment or one or more of the three extracellular loops participate in binding and in subsequent induction of conformational change in the intracellular portions of the receptor. These helices are joined at their ends by three intracellular and three extracellular loops. GPCRs also contain cysteine disulfide bridges between the second and third extracellular loops, an extracellular N-terminus, and a cytoplasmic or intracellular C-terminus. The N-terminus is often glycosylated, while the C-terminus is generally phosphorylated. A conserved, acidic-Arg-aromatic triplet present in the second cytoplasmic loop may interact with G Proteins. Most GPCRs contain a characteristic consensus pattern. Watson, S. and S. Arkinstall, The G protein Linked Receptor Facts Book, Academic Press, San Diego, CA (1994); Bolander, F. F. Molecular Endocrinology, Academic Press, San Diego, CA (1994).

[9] Although GPCRs have many features in common, each GPCR has its own unique characteristics as well. GPCRs have varying nucleotide and amino acid sequences, and varying antigenicity. GPCRs bind a diverse array of specific, extracellular signaling molecules (which can also be referred to as "ligands") including peptides, cytokines, hormones, neurotransmitters, growth factors, and specialized stimuli such as photons,

flavorants, and odorants. Identified ligands include, for example, purines, nucleotides (*e.g.*, adenosine, cAMP, NTPs), biogenic amines (*e.g.*, epinephrine, norepinepherine, dopamine, histamine, noradrenaline, serotonin), acetylcholine, peptides (*e.g.*, angiotensin, calcitonin, chemokines, corticotropin releasing factor, galanin, growth hormone releasing hormone, gastric inhibitory peptide, glucagon, neuropeptide Y, neurotensin, opioids, thrombin, secretin, somatostatin, thyrotropin releasing hormone, vasopressin, vasoactive intestinal peptide), lipids and lipid-based compounds (*e.g.*, cannabinoids, platelet activating factor), excitatory and inhibitory amino acids (*e.g.*, glutamate, GABA), ions (*e.g.*, calcium), and toxins.

[10] In general, a GPCR binds only one type of signaling molecule and GPCRs are classified according to subfamilies based upon their selectivity and specificity for a particular ligand. When the ligand for a receptor is not known, the receptor is known as an orphan receptor. The extracellular domain interacts with or binds to certain signaling molecules or ligands located outside of the cell. The binding of a ligand to the extracellular domain alters the conformation of the receptor's intracellular domain causing the activation of a G protein. The G protein then activates or inactivates a separate plasma-membrane-bound enzyme or ion channel. This chain of events alters the concentration of one or more intracellular messengers (second messengers) such as cyclic AMP (cAMP), inositol triphosphate, diacylglycerol, or Ca^{2+}. These, in turn, alter the activity of other intracellular proteins such as cAMP-dependent protein kinase and Ca^{2+}/calmodulin-dependent protein kinases, leading to the transduction and amplification of the original extracellular signal. Baldwin, J.M., Curr. Opin. Cell Biol. 6:180-190 (1994). The G protein is deactivated by hydrolysis of GTP by GTPase. U.S. Patent Nos. 5,994,097 and 6,063,596.

[11] GPCR mutations, both of the loss-of-function and of the activating variety, have been associated with numerous human diseases, Coughlin, *supra*. For example, retinitis pigmentosa may arise from either loss-of-function or activating mutations in the rhodopsin gene. Somatic activating mutations in the thyrotropin receptor cause hyperfunctioning thyroid adenomas, Parma, J. et al., Nature 365:649-651 (1993). Parma et al. indicate that it may be possible that certain G protein-coupled receptors susceptible to constitutive activation may behave as proto-oncogenes. Interestingly, GPCRs have functional homologues in human cytomegalovirus and herpesvirus, so GPCRs may have been acquired during evolution for viral pathogenesis, Strader et al., FASEB J., 9:745-754 (1995); Arvanitakis et al., Nature, 385:347-350 (1997); Murphy, Annu. Rev. Immunol. 12:593-633 (1994). The

importance of the GPCR superfamily is further highlighted by the recent discoveries that some of its family members, the chemokine receptors CXCR4/Fusin and CCR5, are co-receptors for T cell-tropic and macrophage-tropic HIV virus strains, respectively, Alkhatib et al., Science, 272:1955 (1996); Choe et al., Cell, 85:1135 (1996); Deng et al., Nature, 381:661 (1996); Doranz et al., Cell, 85:1149 (1996); Dragic et al., Nature, 381:667 (1996); Feng et al., Science, 272:872 (1996). It is conceivable that blocking these receptors may prevent infection by the human immunodeficiency (HIV) virus. Other GPCR-related items include regulating cellular metabolism and diagnosing, treating and preventing particular diseases associated with particular GPCRs.

[12] One important way to evaluate GPCRs and antibodies for GPCRs as novel drug targets and for other purposes such as diagnostics is through the creation and use of databases. Such databases can provide large amounts of information about genes, proteins, and other biological matter. An excellent example of such a database is the GPCR database created and maintained by LifeSpan BioSciences, Inc., Seattle, Washington, USA, which database is available by subscription to researchers and others needing such information. The information in the databases can, for example, be searched, compared, and analyzed. The compilation of such databases, as well as the searching, comparing, etc., of the databases, can be referred to as the field of "bioinformatics." Investigations largely related to genes, such as the information found from the sequencing of the human genome, can be called "genomics" while similar activities on proteins can be called "proteomics."

[13] There has gone unmet a need for improved systems, compositions, methods, and the like relating to improved antigenicity of peptides from GPCRs and antibodies relating thereto. The present invention provides these and other advantages.

SUMMARY

[14] The present invention provides antigenic peptides for GPCRs and antibodies relating thereto, and related systems, methods, compositions, and the like, such as diagnostics and medicaments. Where antibodies against a given GPCR are not known, the present invention provides such antibodies, and preferred antigenic sequences for producing such antibodies. Where antibodies against a given GPCR are known, the present invention provides preferred antigenic peptides for producing antibodies that exhibit improved specificity, affinity or capacity to perform antibody-related actions relative to the known

antibodies. The present invention also provides improved methods of selecting antigenic peptides from any desired protein or polypeptide, as well as antigenic peptides so produced and antibodies against such antigenic peptides.

[15] The antigenic peptides and antibodies herein can be used, for example, to detect the presence or absence of corresponding GPCRs. They can be used to diagnose a variety of diseases and disorders in which GPCRs are involved, such as, *e.g.*, immune-related diseases, cell growth-related diseases, cell regeneration-related diseases, immunological-related cell proliferative diseases, and autoimmune diseases. Examples of specific diseases include AIDS, allergies, Alzheimer's disease, amyotrophic lateral sclerosis, atherosclerosis, bacterial, fungal, protozoan and viral infections, benign prostatic hypertrophy, bone diseases (*e.g.*, osteoarthritis, osteoporosis), carcinoma (*e.g.*, basal cell carcinoma, breast carcinoma, embryonal carcinoma, ovarian carcinoma, renal cell carcinoma, lung adenocarcinoma, lung small cell carcinoma, pancreatic carcinoma, prostate carcinoma, transitional carcinoma of the bladder, squamous cell carcinoma, thyroid carcinoma), cardiomyopathy, chronic and acute inflammation, circadian rhythm disorders, COPD, Crohn's disease, diabetes, Duchenne muscular dystrophy, embryonal carcinoma, endotoxic shock, environmental stress (*e.g.*, by heat, UV or chemicals), gastrointestinal disorders, glioblastoma multiform, graft vs. host disease, Hodgkin's disease, inflammatory bowel disease, ischemia, stroke, lymphoma, macular degeneration, malignant cytokine production, malignant fibrous histiocytoma, melanoma, meningioma, mesothelioma, multiple sclerosis, nasal congestion, pain, Parkinson's disease, prostate carcinoma, psoriasis, rhabdomyosarcoma, psychotic or neurological disorders (*e.g.*, anxiety, depression, schizophrenia, dementia, mental retardation, memory loss, epilepsy, locomotor problems, respiratory disorders, asthma, eating/body weight disorders including obesity, bulimia, diabetes, anorexia, nausea, hypertension, hypotension), renal disorders, reperfusion injury, rheumatoid arthritis, sarcoma (*e.g.*, chondrosarcoma, Ewing's sarcoma, osteosarcoma), septicemia, seminoma, sexual/reproductive disorders, tonsil, transitional carcinoma of the bladder, transplant rejection, trauma, tuberculosis, ulcers, ulcerative colitis, urinary retention, vascular and cardiovascular disorders, or any other disease or disorder in which G protein-coupled receptors are involved, as well as learning and/or memory disorders, diabetes, pain perception disorders, anorexia, obesity, hormonal release problems, or any other disease or disorder in which a specific GPCR is involved.

[16] The association of particular GPCRs with particular diseases, disorders or conditions will be apparent to a person of ordinary skill in the art in view of the present application, and thus the association with the antibodies of the present invention to the corresponding diseases, disorders or conditions.

[17] Thus, in one aspect the present invention provides isolated antigenic peptides according to any one of SEQ ID NOS. 692-2292. The isolated antigenic peptides also comprise an amino acid sequences that are at least about 90% or 95% identical to such sequences, or be an analog of such sequences, or comprise a short antigenic amino acid sequence that is identical to at least 5 consecutive amino acids set forth in any one of such sequences or contain no more than one conservative amino acid substitution over at least 7 consecutive amino acids set forth in any of such sequences. The present invention also provides antibodies, particularly isolated antibody having high specificity and high affinity or avidity for a particular GPCR or other target polypeptide or protein, generated using the antigenic peptides discussed herein.

[18] The present invention also provides isolated nucleic acid molecules encoding an antigenic peptide or antibody as described herein. The molecule can encode a naturally occurring human antigenic peptide. In some embodiments, the present invention provides processes for producing an isolated polynucleotide can comprise hybridizing a nucleotide encoding an antigenic peptide as discussed herein to DNA such as genomic DNA under stringent or highly stringent conditions and isolating the polynucleotide detected with the nucleotide.

[19] The present invention also provides kits and assays, such as kits for the detection of antibodies against a particular GPCR or other target polypeptide in a sample comprising: a) an isolated antigenic peptide as discussed herein and derived from the particular GPCR, and b) at least one of a reagent or a device for detecting the antibodies, or comprising: a) an isolated antibody as described herein, and b) at least one of a reagent or a device for detecting the antibody. The assays include detection of a particular GPCR in a sample, comprising: a) providing an isolated antigenic peptide, b) contacting the isolated antigenic peptide corresponding to the particular GPCR with the sample under conditions suitable and for a time sufficient for the antigenic peptide to bind to one or more antibodies specific for the target protein present in the sample, to provide an antibody-bound target protein, and c) detecting the antibody-bound antigenic peptide, and therefrom determining whether the

sample contains the particular GPCR. The assays can further comprise the step of binding the isolated antigenic peptide or the antibody to a solid substrate, and the sample can be an unpurified sample, for example from a human being.

[20] The assay can be selected from the group consisting of a countercurrent immuno-electrophoresis (CIEP) assay, a radioimmunoassay, a radioimmunoprecipitation, an enzyme-linked immuno-sorbent assay (ELISA), a dot blot assay, an inhibition or competition assay, a sandwich assay, an immunostick (dip-stick) assays, a simultaneous assay, an immunochromatographic assay, an immunofiltration assay, a latex bead agglutination assay, an immunofluorescent assay, a biosensor assay, and a low-light detection assay.

[21] In other aspects, the present invention provides methods of identifying an amino acid sequence for an antigenic peptide from a candidate polypeptide sequence such as a polypeptide or protein wherein the antigenic peptide has a length of about 5 to about 100 amino acids, typically 6 amino acids to about 50 amino acids, and preferably 7 amino acids to about 20 amino acids. The methods comprise: a) searching the candidate polypeptide sequence using a comparison window of the length, and b) selecting against amino acid sequences of the length and having at least 1 to 3 or 4 characteristics selected from the group consisting of 1) at least two consecutive prolines, 2) at least two consecutive serines, 3) at least two consecutive lysines, 4) at least two consecutive arginines, 5) at least two consecutive aspartic acids, 6) at least two consecutive glutamic acids, 7) methionine, 8) tryptophan, and 9) at least five consecutive amino acids comprising no charged amino acids. Preferably, the method comprises selecting against at least 5 to all of the characteristics.

[22] The methods can comprise, independently or in addition, selecting against amino acid sequences of the desired length having at least one of the following characteristics 1) sequences having at least 5 consecutive amino acids that are identical to an alternative amino acid sequence from an alternative polypeptide that can be different from the candidate polypeptide, 2) posttranslational modification sites, and 3) highly hydrophobic sequences. The posttranslational modification sites can be phosphorylation or glycosylation sites. The methods can also comprise performing a BLAST-type or a FAST-type analyses for the candidate polypeptide sequence.

[23] These and other aspects, features, and embodiments are set forth within this application, including the following Detailed Description and attached drawings. The present invention comprises a variety of aspects, features, and embodiments; such multiple aspects,

features, and embodiments can be combined and permuted in any desired manner. In addition, various references are set forth herein, including in the Cross-Reference To Related Applications, that discuss certain compositions, apparatus, methods, or other information; all such references are incorporated herein by reference in their entirety and for all their teachings and disclosures, regardless of where the references may appear in this application.

BRIEF DESCRIPTION OF THE DRAWING

[24] Figure 1 depicts representative examples of the nucleotide and amino acid sequences of the GPCRs for which antigenic peptides are set forth herein, SEQ ID NOS. 1 - 691.

[25] Figure 2 depicts amino acid sequences for the antigenic peptides for the GPCRs herein, SEQ ID NOS. 692-2292.

[26] Figure 3 depicts a listing of GPCRS for which commercially available antibodies are putatively available.

DETAILED DESCRIPTION

A. INTRODUCTION AND OVERVIEW

[27] Diseases such as immune-related diseases, cell growth-related diseases, cell regeneration-related diseases, immunological-related cell proliferative diseases, and autoimmune diseases are serious health problems in the modern world. Any improvement in the diagnosis, treatment or other remediation of such diseases is a significant advance for millions of people. The present invention provides methods of identifying and selecting desirable antigenic peptides for GPCRs and other desired target or candidate proteins and polypeptides. The present invention also provides the antigenic peptides themselves, as well as antibodies against the antigenic peptides (and against proteins or polypeptides containing such antigenic peptides), and related diagnostics, antibody-based therapeutics directed to certain diseases and conditions, and other helpful compositions, systems, kits, assays and the like. The compositions, methods, and the like can be useful, for example, as agonists, antagonists, probes, and otherwise as may be desired.

[28] The antigenic peptides have been carefully selected using specific selection criteria and methodologies set forth herein to take advantage of particularly advantageous regions of the GPCRs from which they have been derived to provide unusually specific and

immunogenic antigens. These antigenic peptides are particularly useful for producing highly specific antibodies against the antigenic peptides, which, in turn, also means antibodies that are highly specific for the corresponding GPCRs containing the antigenic peptides. Accordingly, the antigenic peptides of the present invention, and the antibodies produced therefrom, are particularly useful for high specifity, low noise diagnostics and, in the case of the antibodies, for certain antibody-based therapeutics, as well as methods, kits, systems, and the like incorporating or based on such antigenic peptides or antibodies.

[29] The antibodies produced using the antigenic peptides of the present invention, for example, have a specificity for the corresponding GPCR such that the antibodies can selectively detect the corresponding GPCR in a sample containing non-desired or contaminating proteins or polypeptides, such as a tissue or blood sample. Preferably, the antibodies have a high specificity such that no significant amounts of such proteins or polypeptides are detected, and further preferably have a specificity such that only insubstantial to essentially zero amounts of non-desirable proteins are detected.

[30] The antibodies produced using the antigenic peptides of the present invention, for example, typically have an affinity or avidity constant (Ka) of at least about 10^7 liters/mole, typically a high affinity or avidity at least about 10^9 liters/mole, preferably at least about 10^{10} liters/mole, and further preferably at least about 10^{11} liters/mole.

[31] Figure 1 sets forth the DNA and protein sequences for the GPCRs from which the antigenic peptides of the present invention were derived SEQ ID NOS. 1-691. Figure 2 sets forth the amino acid sequences of exemplary antigenic peptides, SEQ ID NOS. 692-2292. The sequences in Figures 1 and 2 are listed according to SEQ ID NO and LSID, which is an identification number assigned to the given sequence in the LifeSpan Biosciences databases. The sequences in Figure 2 also include an identifier LPID, which is also an identification number assigned to the given sequence in the LifeSpan Biosciences databases. Figure 3 depicts GPCRs for which it has been reported that antibodies are commercially available, SEQ ID NOS. 1, 3, 5, 11, 13, 15, 21, 23, 25, 27, 29, 31, 35, 37, 39, 41, 43, 45, 49, 51, 53, 57, 59, 61, 63, 65, 67, 69, 70, 71, 73, 75, 77, 79, 83, 85, 97, 99, 101, 103, 105, 107, 113, 115, 117, 121, 125, 135, 139, 143, 145, 147, 151, 155, 157, 159, 161, 169, 171, 173, 175; 177, 183, 185, 187, 189, 191, 192, 194, 200, 202, 206, 208, 214, 216, 218, 228, 236, 238, 240, 248, 250, 264, 295, 299, 301, 305, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 347, 349, 351, 361, 365, 367, 369, 371, 377, 379,.385, 387, 389, 391, 397,

423, 435, 439, 457, 459, 461, 462, 468, 470, 472, 503, 507, 515, 535, 537, 546, 548, 552, 562, 628, 636; Applicants do not represent that any of the antibodies in Figure 3 that such antibodies are actually commercially available nor that they have any significant specificity nor affinity for the GPCRs reported. For GPCRs for which no antigens or antibodies were previously known, the present invention provides valuable antigenic peptides and antibodies (*see, e.g.*, SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028, 1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292.); for GPCRs for which antigens or antibodies are known, the present invention provides improved antigens in the form of antigenic peptides and improved antibodies (*see, e.g.*, SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372, which are antigenic peptides derived from GPCRs for which antibodies are reportedly commercially available). The antigenic peptides and antibodies, and uses and assays, etc., related to the antigenic peptides, are discussed further below.

[32] The discussion herein, including the following passages, has been separated by headings for convenience. The disclosure under a given heading is not restricted to that heading. For example, the discussion in the definitions section is a part of the disclosure of the invention, the discussion on antigenic peptides also contains discussion related to probes and diagnostics, and the discussion on antibodies contains discussion related to therapeutic compositions, etc.

B. DEFINITIONS

[33] The following paragraphs provide a non-exhaustive list of definitions of some of the terms and phrases as used herein. All terms used herein, including those specifically described below in this section, are used in accordance with their ordinary meanings unless the context or definition indicates otherwise. Also unless indicated otherwise, except within

the claims, the use of "or" includes "and" and vice-versa. Non-limiting terms are not to be construed as limiting unless expressly stated (for example, "including" means "including without limitation" unless expressly stated otherwise).

[34] The terms set forth in this application are not to be interpreted in the claims as indicating a "means plus function" relationship unless the word "means" is specifically recited in a claim, and are to be interpreted in the claims as indicating a "means plus function" relationship where the word "means" is specifically recited in a claim. Similarly, the terms set forth in this application are not to be interpreted in method or process claims as indicating a "step plus function" relationship unless the word "step" is specifically recited in the claims, and are to be interpreted in the claims as indicating a "step plus function" relationship where the word "step" is specifically recited in a claim.

[35] "**Agonist**" indicates a substance, such as a molecule or compound, that interacts with a particular GPCR, for example by binding to the GPCR, to activate, increase, or prolong the amount or the duration of the effect of the biological activity or functionality of the GPCR. Agonists include proteins, nucleic acids, carbohydrates, or any other molecules that bind to and positively modulate the effect of the GPCR. Agonists and other modulators of the particular GPCR can be identified using *in vitro* or *in vivo* assays for G protein-coupled receptor expression or G protein-mediated signaling. For example, assays for agonists and other modulators include expressing a particular GPCR in cells or cell membranes, applying putative modulator compounds in the presence or absence of a specific known or putative ligand and then determining the functional effects on the particular GPCR-mediated signaling. Samples or assays comprising a particular GPCR that are treated with a potential agonist or other modulator are compared to control samples without the agonist or other modulator to examine the extent of modulation. Control samples can be assigned a relative activity value for the particular GPCR of 100%. Agonist activity on a particular GPCR is achieved when the G protein-coupled receptor activity value relative to the control is at least about 110%, optionally about 150%, preferably about 200-500%, or about 1000-3000% or higher. Down-modulation (for example by an antagonist) of a particular GPCR is achieved when the particular GPCR activity value relative to the control is at most about 90%, typically about 80%, optionally about 50% or about 25-0% of the 100% value.

[36] "**Aggregate**," see Complex.

[37] **"Algorithm"** refers to a detailed sequence of actions to perform to accomplish some task. In computer programming, refers to instructions given to the computer.

[38] **"Allele"** or **"allelic sequence"** indicates an alternative form of the gene encoding the GPCR. Alleles may result from at least one mutation in the nucleic acid sequence and may result in altered mRNAs or in polypeptides whose structure or function may or may not be altered. Any given natural or recombinant gene may have none, one, or many allelic forms. Common mutational changes that give rise to alleles are generally ascribed to natural deletions, additions, or substitutions of nucleotides. Each of these types of changes may occur alone or in combination with the others, one or more times in a given sequence.

[39] **"Altered"** nucleic acid sequences encoding the GPCR include those sequences with deletions, insertions, or substitutions of different nucleotides, resulting in a polynucleotide encoding the same GPCR or a polypeptide variant with at least one substantial structural or functional characteristic of the GPCR. Included within this definition are polymorphisms that may or may not be readily detectable using a particular oligonucleotide probe against the polynucleotide encoding the GPCR. "Altered" proteins may contain deletions, insertions, or substitutions of amino acid residues that produce a silent change and result in a functionally equivalent GPCR. Deliberate amino acid substitutions may be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity, or the amphipathic nature of the residues, as long as the biological or immunological activity of the GPCR is retained. For example, negatively charged amino acids may include aspartic acid and glutamic acid, positively charged amino acids may include lysine and arginine, and amino acids with uncharged polar head groups having similar hydrophilicity values may include leucine, isoleucine, and valine; glycine and alanine; asparagine and glutamine; serine and threonine; and phenylalanine and tyrosine.

[40] **"Alternative splicing"** refers to different ways of cutting and assembling exons to produce mature mRNAs.

[41] **"Amino acid"** refers generally to any of a class of organic compounds that contains at least one amino group, $-NH_2$, and one carboxyl group, -COOH. The alpha-amino acids, $RCH(NH_2)COOH$, are the building blocks from which proteins are typically constructed. Amino acid can also refer to artificial chemical analogues or mimetics of a given amino acid as described, depending on the context.

[42] "**Amin acid sequence**" refers to a string of amino acids, such as an oligopeptide, peptide, polypeptide, or protein sequence, or a fragment of any of these, including naturally occurring or synthetic molecules and those comprising an artificial chemical analogue or mimetic of a given amino acid. In this context, "biologically active fragments," "biologically functional fragments," "immunogenic fragments," and "antigenic fragments" refer to fragments of the GPCR that are preferably about 15, 25, or 50 or more amino acids in length and that retain a substantial amount of such activity of the GPCR. Where "amino acid sequence" refers to an amino acid sequence of a naturally occurring protein molecule, "amino acid sequence" and like terms are not necessarily limited to the complete native amino acid sequence associated with the recited protein molecule.

[43] "**Amplification**" indicates the production of additional copies of something, such as a nucleic acid sequence. Amplification can be generally carried out using polymerase chain reaction (PCR) technologies or other technologies such as the cycling probe reaction (CPR) that are well known in the art. *See, e.g.*, Dieffenbach, C. W. and G. S. Dveksler, PCR Primer, a Laboratory Manual, pp.1-5, Cold Spring Harbor Press, Plainview, N.Y. (1995); U.S. Patents Nos. 5,660,988, 5,731,146 and 6,136,533.

[44] "**Amplification primers**" are oligonucleotides such as natural, analog or artificially created nucleotides that can serve as the basis for the amplification of a selected nucleic acid sequence. They include, for example, both PCR primers and ligase chain reaction oligonucleotides.

[45] "**Analog**" or "**variant**" indicates a GPCR or antigenic peptide that has been modified by deletion, addition, modification, or substitution of one or more amino acid residues compared to the wild-type sequence. Analogs encompass allelic and polymorphic variants, and also muteins and fusion proteins that comprise all or a significant part of such GPCR, *e.g.*, covalently linked via side-chain group or terminal residue to a different protein, polypeptide, or moiety (fusion partner). Variants of a particular GPCR protein refer to an amino acid sequence that is altered by one or more amino acids, for example by one or more amino acid substitution, insertion, deletion or modification, or proteins with or without associated native-pattern glycosylation. The variant may have "**conservative**" changes. Such "conservative" changes generally are well known in the art and readily determinable for a particular GPCR in view of the present application. Conservative changes include, for example, substitutions where a substituted amino acid has similar structural or chemical

properties to the amino acid it replaced (*e.g.*, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine, arginine, histidine, asparagine, and glutamine; amino acids containing sulfur include methionine and cysteine; polar hydroxy amino acids include serine, threonine, and tyrosine; large hydrophobic amino acids include phenylalanine and tryptophan; small hydrophobic amino acids include alanine, leucine, isoleucine, and valine). A variant may also have "**nonconservative**" changes which means that the replacement amino acid provides some substantial change in the amino sequence.

[46] A variant preferably retains at least about 90% identity, and more preferably at least about 95% identity. Within certain embodiments, such variants contain alterations such that the ability of the variant to induce an immunogenic response is not substantially eliminated; in some embodiments the ability to an immunogenic response is not substantially diminished. Modifications of amino acid residues may include but are not limited to aliphatic esters or amides of the carboxyl terminus or of residues containing carboxyl side chains, O-acyl derivatives of hydroxyl group-containing residues, and N-acyl derivatives of the amino-terminal amino acid or amino-group containing residues, *e.g.*, lysine or arginine. Guidance in determining which and how many amino acid residues may be substituted, inserted, deleted or modified without diminishing immunological or biological activity may be found in view of the present application using any of a variety of methods and computer programs known in the art, for example, DNASTAR software. Properties of a variant may generally be evaluated by assaying the reactivity of the variant with, for example, antibodies as described herein or evaluating a biological activity characteristic of the native protein as described herein or as known in the art in view of the present application. Certain polynucleotide variants are capable of hybridizing under appropriately stringent conditions to a naturally occurring DNA sequence encoding a particular GPCR protein (or a complementary sequence). Such hybridizing nucleic acid sequences are also within the scope of this invention.

[47] "**Antagonist**" refers to a molecule which interacts with a particular GPCR, for example by binding to the particular GPCR, and prevents, inactivates, decreases or shortens the amount or the duration of the effect of the biological activity of the GPCR. Antagonists include proteins, nucleic acids, carbohydrates, antibodies, or any other molecules that so affect the GPCR. Antagonists can be identified, for example, using appropriate screens

corresponding to those described for agonists above and elsewhere herein or as would be apparent to those skilled in the art in view of the present application.

[48] **"Antibody"** indicates one type of binding partner, typically encoded by an immunoglobulin gene or immunoglobulin genes, and refers to, for example, intact monoclonal antibodies (including agonist and antagonist antibodies), polyclonal antibodies, phage display antibodies, and multispecific antibodies (*e.g.*, bispecific antibodies) formed, for example, from at least two intact antibodies. Antibody also refers to fragments thereof, which comprise a portion of an intact antibody, generally the antigen-binding or variable region of the intact antibody that are capable of binding the epitopic determinant. Examples of antibody fragments include Fab, Fab', $F(ab')_2$, and Fv fragments, diabodies, linear antibodies, single-chain antibody molecules, and multispecific antibodies formed from antibody fragments. *See* US Patent No. 6,214,984. Antibody fragments may be synthesized by digestion of an intact antibody or synthesized de novo either chemically or utilizing recombinant DNA technology. Antibodies according to the present invention have at least one of adequate specificity, affinity and capacity to perform the activities desired for the antibodies. Antibodies can, for example, be monoclonal, polyclonal, or combinatorial. Antibodies that bind GPCR polypeptides can be prepared using intact polypeptides or using fragments containing small peptides of interest as the immunizing antigen. The polypeptide or oligopeptide used to immunize an animal (*e.g.*, a mouse, a rat, or a rabbit) can be derived from the translation of RNA, or synthesized chemically, and can be conjugated to a carrier protein if desired. Commonly used carriers that are chemically coupled to peptides include bovine serum albumin, thyroglobulin, and keyhole limpet hemocyanin (KLH). The coupled peptide is then used to immunize the animal.

[49] **"Antigenic determinant"** refers to the antigen recognition site on an antigen (*i.e.*, epitope). Such antigenic determinant may also be immunogenic.

[50] **"Antisense"** refers to any composition containing a nucleic acid sequence that is complementary to a specific nucleic acid sequence. "Antisense strand" refers to a nucleic acid strand that is complementary to the "sense" strand. Antisense molecules may be produced by any method including transcription or synthesis including synthesis by ligating the gene(s) of interest in a reverse orientation to a desired promoter that permits the synthesis of a complementary strand. Once introduced into a cell, the complementary nucleotides can combine with natural sequences produced by the cell to form duplexes and to block either

transcription or translation. The designation "negative" can refer to the antisense strand, and the designation "positive" can refer to the sense strand.

[51] **"Biologically active"** or **"biologically functional,"** when referring to an antigenic peptide, indicates that the antigenic peptide induces an immunogenic response specific for the antigenic peptide and thus for the GPCR from which is was obtained. A variant, fragment, etc., of an antigenic peptide is "biologically active" or "biologically functional" if the ability to induce the specific immunogenic response is not substantially diminished. The term "not substantially diminished" means retaining a functionality that is at least about 90% of the functionality of the native antigenic peptide. Appropriate assays designed to evaluate such functionality may be designed based on existing assays known in the art in view of the present application, or on the representative assays provided herein.

[52] **"Annotation"** refers to the provision of helpful or identifying information about a GPCR or other open reading frame (ORF), such as locus name, key words, and Medline references.

[53] **"BLAST"** refers to the Basic Local Alignment Search Tool, which is a technique for detecting ungapped sub-sequences that match a given query sequence. BLAST can be used as a preliminary step for detecting ORF boundaries.

[54] **"BLASTP"** refers to a BLAST program that compares an amino acid query sequence against a protein sequence database.

[55] **"BLASTX"** refers to a BLAST program that compares the six-frame conceptual translation products of a nucleotide query sequence (both strands) against a protein sequence database. BLASTX can be used to create a sub-database of ORFs which may exist on a contig, and to identify the best match between one of these ORFs and a sequence in an external database.

[56] **"Buffer"** refers to a component in a solution to provide a buffered solution that resists changes in pH by the action of its acid-base conjugate components.

[57] **"CDS"** refers to the GenBank DNA sequence entry for coding sequence. A coding sequence is a sub-sequence of a DNA sequence that is surmised to encode a gene. A complete gene coding sequence begins with an "ATG" and ends with a stop codon.

[58] **"Cl ne"** in molecular biology refers to a vector carrying an insert DNA sequence.

[59] **"Cloning"** in molecular biology refers to a recombinant DNA technique used to produce multiple, up to millions or more, copies of a DNA sequence. The DNA sequence is

inserted into a small carrier or vector (*e.g.*, plasmid, bacteriophage, or virus) and inserted into a host cell for amplification or expression.

[60] **"Cluster"** refers to a group of ORFs related to one another by sequence homology. Clusters are generally determined by a specified degree of homology and overlap (*e.g.*, a stringency).

[61] **"Comparison window"** indicates a segment of any one of the number of contiguous positions selected from the group consisting of from 20 to 600, usually about 50 to about 200, more usually about 100 to about 150 in which a sequence may be compared to a reference sequence of the same number of contiguous positions after the two sequences are aligned to enhance sequence similarity. Methods of alignment of sequences for comparison will be readily apparent to a person of ordinary skill in the art in view of the present application.

[62] **"Complementary"** or **"complementarity"** refers to the natural binding of polynucleotides by base pairing. For example, the sequence "A-G-T" binds to the complementary sequence "T-C-A." Complementarity between two single-stranded molecules may be "partial," such that only some of the nucleic acids bind, or it may be "complete," such that all of the nucleotides of at least one of the single-stranded molecules binds to corresponding nucleotides of the other single-stranded molecule. The degree of complementarity between nucleic acid strands has significant effects on the efficiency and strength of the hybridization between the nucleic acid strands. This can be of particular importance in amplification reactions, which can depend upon binding between nucleic acids strands, and in the design and use of peptide nucleic acid (PNA) molecules.

[63] **"Complex,"** or **"aggregate,"** indicates a dimer or multimer formed between at least two proteins or other macromolecules, for example a GPCR and its ligand.

[64] **"Composition"** indicates a combination of multiple substances into a mixture.

[65] **"Composition comprising a given amino acid sequence"** refers broadly to any composition containing the given amino acid sequence. The composition may comprise a dry formulation, an aqueous solution, or a sterile composition.

[66] **"Consensus sequence"** refers to the sequence that reflects the most common choice of base or amino acid at each position from a series of related DNA, RNA, or protein sequences. Areas of particularly good agreement often represent conserved functional domains. The generation of consensus sequences has typically been subjected to intensive mathematical analysis.

[67] **"Conservative changes"** to an amino acid sequence, see Analog.

[68] **"Deletion"** refers to a change in the amino acid or nucleotide sequence that results in the absence of one or more amino acid residues or nucleotides.

[69] **"Derivative"** refers to chemical modification of an antigenic peptide, or of an antibody specific for and created from the antigenic peptide. A derivative peptide can be modified, for example, by glycosylation or pegylation.

[70] **"Diabodies"** refers to one type of antibody comprising small antibody fragments with two antigen-binding sites, which fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) on the same polypeptide chain (V_H-V_L). By using a linker that is too short to allow pairing between the two domains on the same chain, the domains pair with the complementary domains of another chain and create two antigen-binding sites. Diabodies are described, for example, in EP 404,097; WO 93/11161; and Holliger et al., Proc. Natl. Acad. Sci. USA, 90:6444-6448 (1993).

[71] **"Database"** refers to a structured format for organizing and maintaining information or data, a collection of data records, in a computer-readable form that can be rapidly and easily retrieved. A database is typically stored in a computer-readable memory. Records may comprise web pages, graphics, audio files, text files, or links. Records may or may not be further broken into fields. Database records are usually indexed and come with a search interface to find records of interest.

[72] **"E-value"** refers to a result of a FASTA analysis. The number indicates the probability that a match between two sequences is due to random chance.

[73] **"Expression vector"** is a specialized vector constructed so that the gene inserted in the vector can be expressed in the cytoplasm of a host cell.

[74] **"FASTA"** refers to a modular set of sequence comparison programs used to compare an amino acid or DNA sequence against all entries in a sequence database. FASTA was written by Professor William Pearson of the University of Virginia Department of Biochemistry. The program uses the rapid sequence algorithm described by Lipman and Pearson (1988) and the Smith-Waterman sequence alignment protocol. FASTA performs a protein to protein comparison.

[75] **"FASTX"** refers to a module of the FASTA protocol used to define optimal ORF boundaries while searching for genes. FASTX uses a nucleotide to protein sequence comparison.

[76] **"Fragment,"** see Portion.

[77] **"GenBank"** refers to a family of public databases comprising nucleic acid and amino acid sequence information, including the GenPept bacterial peptide database.

[78] **"Gene"** refers to the basic unit of heredity that carries the genetic information for a given RNA or protein molecule. A gene is composed of a contiguous stretch of DNA and contains a coding region that is flanked on each end by regions that are transcribed but not translated. A gene is a segment of DNA involved in producing a biologically active or biologically functional polypeptide chain.

[79] **"Heterologous"** indicates a nucleic acid that comprises two or more subsequences that are not found in the same relationship to each other in nature. For instance, the nucleic acid is typically recombinantly produced, having two or more sequences from unrelated genes arranged to make a new functional nucleic acid, *e.g.*, a promoter from one source and a coding region from another source. Similarly, a heterologous protein indicates that the protein comprises two or more subsequences that are not found in the same relationship to each other in nature (*e.g.*, a fusion protein).

[80] **"Hit Threshold"** refers to a pre-set E-value or P-value for evaluating sequence matches. For example, this value can be set at le-6 for finding genes; and at le-15 for clustering genes.

[81] **"Homology"** refers to a degree of complementarity. There may be partial homology or complete homology. The word **"identity"** may substitute for the word "homology." A partially complementary sequence that at least partially, and substantially, inhibits a corresponding sequence from hybridizing to a target nucleic acid is referred to as "substantially homologous." The inhibition of hybridization of the completely complementary sequence to the target sequence may be examined using a hybridization assay (*e.g.*, Southern or Northern blot, *in situ* hybridization, solution hybridization) under conditions of reduced stringency. A substantially homologous sequence or hybridization probe will compete for and inhibit the binding of a completely homologous sequence to the target sequence under stringency conditions that inhibit non-specific binding but permit specific binding. The absence of non-specific binding may be tested by the use of a second target sequence which lacks even a partial degree of complementarity (*e.g.*, less than about 30% homology or identity). In the absence of non-specific binding, the substantially

homologous sequence or probe will not hybridize to the second, non-complementary target sequence.

[82] **"Humanized antibody"** refers to antibody molecules in which the amino acid sequence in the non-antigen-binding regions has been altered so that the antibody more closely resembles a human antibody, and still retains its original binding ability. Typically, humanized antibodies are human immunoglobulins (recipient antibody) in which residues from a complementarity-determining region (CDR) of the recipient are replaced by residues from a CDR of a non-human species (donor antibody) such as mouse, rat or rabbit having the desired specificity, affinity, and capacity. In some instances, Fv framework residues of the human immunoglobulin are replaced by corresponding non-human residues. Furthermore, humanized antibodies may comprise residues that are found neither in the recipient antibody nor in the imported CDR or framework sequences. These modifications are typically made to further refine and optimize antibody performance. In general, the humanized antibody will comprise substantially all of at least one, and typically two, variable domains, in which all or substantially all of the CDR regions correspond to those of a non-human immunoglobulin and all or substantially all of the framework (FR) regions are those of a human immunoglobulin sequence. The humanized antibody optimally also will comprise at least a portion of an immunoglobulin constant region (Fc), typically that of a human immunoglobulin. For further details see, *e.g.*, Jones et al., Nature, 321:522-525 (1986); Reichmann et al., Nature, 332:323-329 (1988); and, Presta, Curr. Op. Struct. Biol., 2:593-596 (1992).

[83] **"Identity,"** see Homology.

[84] **"Immunocytochemistry"** refers to the use of immunologic methods, including a specific antibody, to study cell constituents.

[85] **"Immunohistochemistry"** refers to the use of immunologic methods, including a specific antibody, to study specific antigens in tissue slices.

[86] **"Immunolocalization"** refers to the use of immunologic methods, including a specific antibody, to locate molecules or structures within cells or tissues.

[87] **"Immunologically active"** refers to the capability of a natural, recombinant, or synthetic GPCR, or any immunogenic fragment thereof, to induce a specific immune response in appropriate animals or cells and to bind with specific antibodies. A polypeptide is "immunologically active" if it is recognized by (*e.g.*, specifically bound by) a B-cell or T-

cell surface antigen receptor. Immunological activity may generally be assessed using well known techniques, such as those summarized in Paul, Fundamental Immunology, 3rd ed., 243-247, Raven Press (1993) and references cited therein. Such techniques include screening polypeptides derived from the native polypeptide for the ability to react with antigen-specific antisera or T-cell lines or clones, which may be prepared in view of the present application using well known techniques. Preferably, an immunologically active portion of a GPCR protein reacts with such antisera or T-cells at a level that is not substantially lower than the reactivity of the full-length polypeptide (*e.g.*, in an ELISA or T-cell reactivity assay). Such screens may generally be performed using methods well known to those of ordinary skill in the art in view of the present application, such as those described in Harlow and Lane, Antibodies: A Laboratory Manual, Cold Spring Harbor Press (1988). B-cell and T-cell epitopes may also be predicted via computer analysis.

[88] "**Immune response**" refers to any of the body's immunologic reactions to an antigen such as antibody formation, cellular immunity, hypersensitivity, or immunological tolerance.

[89] "**Insertion**" and "**addition**" when referring to a change in a nucleotide or amino sequence indicate the addition of one or more nucleotides or amino acid residues, respectively, to the sequence.

[90] "***In situ* hybridization**" refers to use of a nucleic acid probe, typically a DNA or RNA probe, to detect the presence of a DNA or RNA sequence in target cells such as cloned bacterial cells, cultured eukaryotic cells, or tissue samples. *In situ* hybridization can also be used for locating genes on chromosomes. The process can be performed by preparing a microscope slide with cells in metaphase of mitosis, then treating slide with a weak base to denature the DNA. Next, pour radioactively labeled probe onto the slide under hybridizing conditions, expose the slide to a photographic emulsion for a suitable period such as a few days or weeks, then develop the emulsion.

[91] "**Isoform**" refers to different forms of a protein that may be produced from different genes or from the same gene by alternative RNA splicing.

[92] "**Isolated**" generally means that the material is removed from its original environment (*e.g.*, the natural environment if it is naturally occurring).

[93] "**Library**" refers physically to a pool of nucleic acid fragments that has been propagated in a cloning vector. Library can also refer to an electronic collection of genomic

or proteomic sequence data, including raw sequences, contigs, ORFs and loci from a specific organism.

[94] "**Ligand**" refers to an ion or molecule that binds with another molecule, such as a GPCR, to form a macromolecule such as a receptor-ligand complex. An "endogenous ligand" refers to a native ligand that binds to the receptor of the GPCR and modulates biological activity or functionality of the GPCR in its native environment. A "specific ligand" is a ligand able to bind to a particular GPCR and modulate the biological activity or functionality of the particular GPCR; an endogenous ligand is one example of a specific ligand.

[95] "**Microarray**" refers to an array of distinct nucleic acid or amino acid molecules arrayed on a substrate, such as paper, nylon or any other type of membrane, filter, chip, glass slide, or any other suitable solid support. Microarrays can also refer to tissue microarrays, composed of small tissue pieces arranged on a slide. U.S. Pat. No. 5,143,854 and PCT Patent Publication Nos. WO 90/15070 and 92/10092.

[96] "**Mimetic**" refers to a molecule, *e.g.*, a peptide or non-peptide agent, such as a small molecule, that is able to perform the same biological activity as a certain biologically active agent. For example, some mimetics are molecules comprising the same biological function or activity as the particular GPCR. The structure of the mimetic can be developed from knowledge of the structure of the particular GPCR or portions thereof. For appropriate mimetics, the mimetic is able to effect some or all of the actions of a given antigenic peptide or antibodies against the angtigenic peptide. Such mimetics can be made, in view of the present application, using techniques well known in the art, *see, e.g.*, U.S. Patent Nos. 6,197,752; 6,093,697; 6,207,643; 5,849,323, and can be included in the various processes, methods, and systems, etc., described herein, such as databases, binding partner assays, probes, medicaments, and therapeutics.

[97] "**Modulate**" refers to controllably changing the activity of a substance or other item, such as the biological activity of a GPCR, antigenic peptide or corresponding antibody. For example, modulation may cause an increase or a decrease in protein activity, binding characteristics, or other biological, functional, or immunological properties of the GPCR.

[98] "**Mon clonal antibody**" refers to an antibody obtained from a population of substantially homogeneous antibodies, *e.g.*, the individual antibodies comprising the population are identical except for possible naturally occurring mutations that may be present

in minor amounts. Monoclonal antibodies include "chimeric" antibodies (immunoglobulins) in which a portion of the heavy or light chain is identical with or homologous to corresponding sequences in antibodies derived from a particular species or belonging to a particular antibody class or subclass, while the remainder of the chain(s) is identical with or homologous to corresponding sequences in antibodies derived from another species or belonging to another antibody class or subclass, as well as fragments of such antibodies, so long as they exhibit the desired biological activity. U.S. Pat. No. 4,816,567; Morrison et al., P.N.A.S. USA, 81:6851-6855 (1984). Monoclonal antibodies are highly specific, being directed against a single antigenic site. As a matter of distinction, polyclonal antibody preparations typically include different antibodies directed against different determinants (epitopes) of a target antigen whereas each monoclonal antibody is directed against a single determinant on the antigen. Monoclonal antibodies can be synthesized by hybridoma culture, uncontaminated by other immunoglobulins. For example, the monoclonal antibodies to be used in accordance with the present invention may be made by the hybridoma method first described by Kohler and Milstein, Nature, 256:495 (1975), or may be made by recombinant DNA methods. *See, e.g.*, U.S. Pat. No. 4,816,567. Monoclonal antibodies may also be isolated from phage antibody libraries using the techniques described in Clackson et al., Nature, 352:624-628 (1991), and Marks et al., J. Mol. Biol., 222:581-597 (1991), for example. The modifier "monoclonal" indicates the character of the antibody as being obtained from a substantially homogeneous population of antibodies, and is not to be construed as requiring production of the antibody by any particular method.

[99] **"Nonconservative"** changes to an amino acid sequence, see Analog.

[100] **"Northern blotting"** or **"Northern analysis"** refers to a method used to detect specific RNA sequences. For example, the process can be performed by electrophoresing RNA in a denaturing agarose gel, transferring the gel onto a membrane, and hybridizing with a labeled RNA or DNA probe.

[101] **"Nucleic acid sequence"** refers to a polymer comprising a string of **"nucleic acids"** such as an oligonucleotide, or a polynucleotide or fragment thereof. The nucleic acid sequence can be from DNA or RNA of genomic or synthetic origin, may be single-stranded or double-stranded, and may represent the sense or the antisense strand. A nucleic acid sequence can also be a PNA or a DNA-like or RNA-like material. Unless stated otherwise,

the term encompasses nucleic acids containing known analogues or mimetics of natural nucleotides that have similar binding properties as the reference nucleic acid.

[102] "**Oligonucleotide**" refers to a nucleic acid sequence, generally between 6 nucleotides to 60 nucleotides, preferably about 15 to 30 nucleotides, and most preferably about 20 to 25 nucleotides, that can, for example, be used in PCR or other nucleic acid amplification or in a hybridization assay or microarray. "Oligonucleotide" includes "amplimers," "primers," "oligomers," and "probes," as these terms are commonly defined in the art. Oligonucleotides can be chemically synthesized. Such synthetic oligonucleotides may have no 5' phosphate and if so will not ligate to another oligonucleotide without adding a phosphate, typically by using an ATP in the presence of a kinase. A synthetic oligonucleotide will ligate to a fragment that has not been dephosphorylated.

[103] "**Operably linked**" or "**operably connected**" indicates that one element of an apparatus, system, or method, etc., is connected to another element of the apparatus, system, or method, etc., such that the two elements are able to perform their intended purposes. For example, when a promoter is linked to a polynucleotide to allow transcription of the polynucleotide, it is "operably linked" to the polynucleotide.

[104] "**Orphan receptor**" refers to a receptor for which the endogenous ligand or other ligands inducing biological activity are not known.

[105] "**PCR**" or "**polymerase chain reaction**" refers to an *in vitro* method that uses oligonucleotide primers, enzymes, and a series of repetitive temperature cycles to generate millions of copies of a nucleic acid, typically DNA, from an original specimen of a specific DNA sequence, which specimen may be present only in a trace amount.

[106] "**Plasmids**" refers to extrachromasomal genetic elements composed of DNA or RNA found in both eukaryotic and prokaryotic cells that can propagate themselves autonomously in cells. Plasmids can be used as carriers or vectors to clone DNA molecules. They are designated by a lower case p preceded or followed by capital letters or numbers. The starting plasmids herein are either commercially available, publicly available on an unrestricted basis, or can be constructed from available plasmids in accord with published procedures. In addition, equivalent plasmids to those described are known in the art and will be apparent to the ordinarily skilled artisan in view of the present application.

[107] **"Polynucleotide encoding a polypeptide"** indicates a polynucleotide that includes only the coding sequence for the polypeptide as well as polynucleotides that include additional coding or non-coding sequence.

[108] **"Portion"** or **"fragment"** with regard to a protein (as in "a portion of a given protein") refers to parts of that protein, a subsequence of the complete amino acid sequence of the receptor containing at least about 8, usually at least about 12, more typically at least about 20, and commonly at least about 30 or more contiguous amino acid residues, up to the entire amino acid sequence minus one amino acid. Thus, a protein "comprising at least a portion of the amino acid sequence of SEQ ID NO:XX" or a protein "comprising at least a portion of the amino acid sequence of a particular GPCR" encompasses the full-length protein and fragments thereof. A portion or fragment of a nucleic acid refers to nucleic acid sequences that are greater than about 12 nucleotides in length, and typically at least about 60 or 100 nucleotides, generally at least about 1000 nucleotides, or at least about 10,000 nucleotides in length, up to the entire nucleic acid sequence minus one nucleic acid.

[109] **"P-value"** is a statistical term used to indicate the probabilty that an event is due to random chance. When used in reference to a result of BLAST searches, the number indicates the probability that a match between two sequences is due to random chance.

[110] **"Receptor"** refers to a molecular structure, typically within a cell or on a cell surface, that selectively binds a specific substance (a ligand) and a specific physiologic effect that accompanies the binding. GPCRs are a type of cell-surface receptor, which means a protein in, on, or traversing the cell membrane (in the case of GPCRs, traversing the cell membrane) that recognizes and binds to specific molecules in the surrounding fluid. The binding to a receptor may serve to transport molecules into the cell's interior or to signal the cell to respond in some way.

[111] **"Recombinant"** refers to both a method of production and a structure. Some recombinant nucleic acids and proteins are made by the use of recombinant DNA techniques that involve human intervention, either in manipulation or selection. Others are made by fusing two fragments that are not naturally contiguous to each other. Engineered vectors are encompassed, as well as nucleic acids comprising sequences derived using any synthetic oligonucleotide process.

[112] **"Sample"** is used in its usual broad sense. For example, a biological sample suspected of containing nucleic acids encoding the GPCR, or fragments thereof, or the GPCR

itself, may comprise a bodily fluid; an extract from a cell, chromosome, organelle, or membrane from a cell; a cell; genomic DNA, RNA, or cDNA (in solution or bound to a solid support); a tissue; a tissue print, and the like. Biological sample refers to samples from a healthy individual as well as to samples from a subject suspected of having or susceptible to having, *e.g.*, immune-related diseases, cell growth-related diseases, cell regeneration-related diseases, immunological-related cell proliferative diseases, and autoimmune diseases. Examples of specific diseases include AIDS, allergies, Alzheimer's disease, amyotrophic lateral sclerosis, atherosclerosis, bacterial, fungal, protozoan and viral infections, benign prostatic hypertrophy, bone diseases (*e.g.*, osteoarthritis, osteoporosis), carcinoma (*e.g.*, basal cell carcinoma, breast carcinoma, embryonal carcinoma, ovarian carcinoma, renal cell carcinoma, lung adenocarcinoma, lung small cell carcinoma, pancreatic carcinoma, prostate carcinoma, transitional carcinoma of the bladder, squamous cell carcinoma, thyroid carcinoma), cardiomyopathy, chronic and acute inflammation, circadian rhythm disorders, COPD, Crohn's disease, diabetes, Duchenne muscular dystrophy, embryonal carcinoma, endotoxic shock, environmental stress (*e.g.*, by heat, UV or chemicals), gastrointestinal disorders, glioblastoma multiform, graft vs. host disease, Hodgkin's disease, inflammatory bowel disease, ischemia, stroke, lymphoma, macular degeneration, malignant cytokine production, malignant fibrous histiocytoma, melanoma, meningioma, mesothelioma, multiple sclerosis, nasal congestion, pain, Parkinson's disease, prostate carcinoma, psoriasis, rhabdomyosarcoma, psychotic or neurological disorders (*e.g.*, anxiety, depression, schizophrenia, dementia, mental retardation, memory loss, epilepsy, locomotor problems, respiratory disorders, asthma, eating/body weight disorders including obesity, bulimia, diabetes, anorexia, nausea, hypertension, hypotension), renal disorders, reperfusion injury, rheumatoid arthritis, sarcoma (*e.g.*, chondrosarcoma, Ewing's sarcoma, osteosarcoma), septicemia, seminoma, sexual/reproductive disorders, tonsil, transitional carcinoma of the bladder, transplant rejection, trauma, tuberculosis, ulcers, ulcerative colitis, urinary retention, vascular and cardiovascular disorders, or any other disease or disorder in which G protein-coupled receptors are involved, as well as learning and/or memory disorders, diabetes, pain perception disorders, anorexia, obesity, hormonal release problems, or any other disease or disorder in which a specific GPCR is involved.

[113] "**Second messengers**" refer to intracellular signaling molecules such as cyclic AMP (cAMP), inositol triphosphate, diacylglycerol, or Ca^{2+}. Second messengers, in turn, alter the

activity of other intracellular proteins such as cAMP-dependent protein kinase and Ca^{2+}/calmodulin-dependent protein kinases, leading to the transduction and amplification of the original extracellular signal.

[114] **"Southern blotting"** refers to a method for detecting specific DNA sequences via hybridization. For example, a DNA sample can be electrophoresed in a denaturing agarose gel, transferred onto a membrane, and hybridized with a complementary nucleic acid probe. "Southern" when used in reference to a database indicates an electronic analog of the laboratory technique, which analysis can be used to identify libraries in which a given DNA sequence, such as a gene, EST, or ORF is present. The terms "Northern" and "Western" likewise can be used for electronic analogs to the respective laboratory techniques described above.

[115] **"Specific binding"** or **"specifically binding"** refers to an interaction between protein or peptide and a certain substance, such as its specific ligand or antibody, and in some cases its agonists or antagonists. The interaction is dependent upon the presence of a particular structure of the protein recognized by the binding molecule (*e.g.*, the antigenic determinant or epitope). For example, if an antibody specifically binds epitope "A," the presence of a polypeptide containing epitope A or the presence of free unlabeled epitope A will reduce the amount of labeled epitope A that binds to the antibody in a reaction containing free labeled epitope A and the antibody. Conversely, the presence of a polypeptide that does not contain epitope A will not reduce the amount of labeled epitope A that binds to the antibody. Highly specific binding indicates that the protein or peptide binds to its particular ligand, antibody, etc., and does not bind in a significant amount to other proteins present in the sample. Typically, a specific or selective reaction will be at least twice the background signal or noise and more typically more than 10 to 100 times the background signal or noise.

[116] **"Stringent conditions"** refer to conditions that permit hybridization between complementary polynucleotide sequences. Suitably stringent conditions can be defined by, for example, the concentrations of salt or formamide in the prehybridization and hybridization solutions, or by the hybridization temperature. Stringency can be increased by reducing the concentration of salt, increasing the concentration of formamide, or raising the hybridization temperature. Stringent conditions are dependent upon the type of probe as well as the length of the probe and the GC content of the probe. "Stringent conditions" typically

occur within a range from about Tm-5°C (5°C below the melting temperature (Tm) of the probe) to about Tm-20-25°C for a cRNA probe and to about Tm-15°C for an oligonucleotide probe. "**Highly stringent conditions**" refers to conditions under which a probe will hybridize to its target sequence, typically in a complex mixture of nucleic acid sequences, but will not substantially hybridize to other sequences. One example of high stringency conditions for a cRNA probe that is 1,000 nucleotides in length and has a GC content of about 60% is about 55-65°C in 50% formamide, 0.1 X SSC, and 200 μg/ml sheared and denatured salmon sperm DNA. One example of low stringency conditions for the same probe in 50% formamide, 0.1 X SSC, and 200 μg/ml sheared and denatured salmon sperm DNA would be 30-35°C. "**Very highly stringent conditions**" indicates that there must be complete identity between the sequences. The temperature range corresponding to a particular level of stringency can be narrowed further by calculating the purine to pyrimidine ratio of the nucleic acid of interest and adjusting the temperature accordingly. Variations on and modifications of the above ranges and conditions will be readily appreciated by those of skill in the art in view of the present application. As will be understood by those of skill in the art in view of the present application, the stringency of hybridization can be altered to identify or detect identical or related polynucleotide sequences. One guide for nucleic acid hybridization is Tijssen, Laboratory Techniques in Biochemistry and Molecular Biology-v.24 Hybridization with Nucleic Acid Probes, Part I "Overview of principles of hybridization and the strategy of nucleic acid assays" (New York: Elsevier 1993).

[117] "**Substantially purified**" refers to nucleic acid or amino acid sequences that are removed from their natural environment and are separated from other components from such natural environment, and are at least about 60% free, preferably about 75% or 85% free, and most preferably about 90%, 95% or 99% free from such other components with which they are naturally associated. Substantially purified preferably indicates a substantially homogeneous state and can be in either a dry or aqueous solution or other composition as desired. Purity and homogeneity can be assayed by standard methods, for example on a mass or molar basis, using analytical chemistry techniques such as polyacrylamide gel electrophoresis or high performance liquid chromatography.

[118] "**Substituti n**" when referring to a change in a nucleotide or amino sequence indicates the replacement of one or more nucleotides or amino acids by different nucleotides or amino acids, respectively.

[119] "**Variant,**" see Analog.

[120] "**Western blotting**" or "**Western analysis**" refers to a method for detecting specific protein sequences. For example, the process can be performed by electrophoresing a protein mixture in a denaturing agarose or acrylamide gel, transferring the mixture onto a membrane, and incubating it with an antibody raised against the protein of interest.

[121] Other terms and phrases are defined in other portions of this application.

C. SELECTION OF DESIRED ANTIGENIC PEPTIDES FOR GPCRs AND OTHER POLYPEPTIDES

[122] The present invention provides improved antigenic peptides, for example as set forth in Figure 2, SEQ ID NOS. 692-2292, and improved methods of identifying such antigenic peptides from known or publicly available sequences of polypeptides or proteins, i.e., from a candidate polypeptide sequence. Polypeptide and protein are used in their traditional sense to indicate lengthy amino acid molecules, whereas the antigenic peptide has a length significantly less than the length of the corresponding polypeptide or protein such that the antigenic peptide is capable of providing significantly improved antigenicity relative to the corresponding polypeptide or protein, typically improved specificity, affinity or avidity. The candidate polypeptide can be, for example, a human protein or polypeptide, a naturally occurring protein or polypeptide or a synthetic or recombinant protein or polypeptide.

[123] The antigenic peptides are typically 5 to about 100 amino acids in length, preferably 6 to about 50 amino acids, and further preferably 7 to about 20 amino acids. The antigenic peptides include short antigenic amino acid sequences (*i.e.*, peptides comprising only a portion of an antigenic sequence as set forth in Figure 2 or as identified using the methods described herein, plus an insignificant number of additional amino acids at one or both ends, where insignificant indicates that the extra amino acids do not substantially interfere with the antigenicity of the antigenic peptide). Such short antigenic peptides can be identical to at least 5, 6, 7 or more consecutive amino acids of the sequences herein or identified using the methods described herein, or can have one or two (or more, with increasing length)

conservative amino acid substitution for antigenic peptides comprising more than 6 or 7 consecutive amino acids of the sequences herein or identified using the methods described herein. Antigenic peptides and sequences, and related antibodies and assays and the like, are discussed further elsewhere herein with regard to GPCRs, but such discussions applies to all antigenic peptides produced according to the methods herein, including proteins and polypeptides such as kinases, phosphatases and any other desired protein or polypeptide.

[124] The identification or selection methods comprise searching the candidate polypeptide sequence using a comparison window of the desired length, then selecting against or rejecting amino acid sequences of the length and having at least 1 characteristic selected from the group consisting of 1) at least two consecutive prolines, 2) at least two consecutive serines, 3) at least two consecutive lysines, 4) at least two consecutive arginines, 5) at least two consecutive aspartic acids, 6) at least two consecutive glutamic acids, 7) methionine, 8) tryptophan, and 9) at least five consecutive amino acids comprising no charged amino acids. Preferably, at least 5, 7, 8, or all of the characteristics are selected.

[125] The identification or selection methods can also comprise selecting against amino acid sequences having at least 5 consecutive amino acids that are identical to an alternative amino acid sequence from an alternative polypeptide, i.e., some polypeptide other than the candidate polypeptide from which the selected antigen was derived, that is different from the candidate polypeptide, posttranslational modification sites, or highly hydrophobic sequences, which indicates sequences adequately hydrophobic to be located in a lipid membrane such as a cellular membrane. The posttranslational modification sites can be phosphorylation or glycosylation sites.

[126] The methods can further comprise performing a BLAST-type or a FAST-type analyses for the candidate polypeptide sequence. Exemplary BLAST-type and FAST-type analyses are described above, including BLAST, BLASTP, BLASTX, FASTA, and FASTX.

D. GENERAL DISCUSSION OF ANTIGENIC PEPTIDES RELATED TO PARTICULAR GPCRS

[127] ANTIGENIC PEPTIDES GENERALLY:

[128] The present invention includes antigenic peptides able to induce specific immunogenic responses, and corresponding binding partners. Such antigenic peptides and

binding partners can be cloned, expressed, isolated, purified, and otherwise obtained or manipulated according to routine methods known in the art in view of the present application.

[129] The present invention further relates to antigenic peptides having an amino acid sequence from a particular GPCR, including analogs, mimetics, fragments, derivatives, and the like of such antigenic peptides. *See* SEQ ID NOS. 1-2292, Figures 1-3. The antigenic peptides may be recombinant, natural or synthetic. The antigenic peptides include (i) antigenic peptides in which one or more of the amino acid residues are substituted with a conserved or non-conserved amino acid residue (preferably a conserved amino acid residue) and such substituted amino acid residue may or may not be one encoded by the genetic code, (ii) antigenic peptides in which one or more of the amino acid residues includes a substituent group, (iii) antigenic peptides in which the mature polypeptide is complexed (*e.g.*, fused or otherwise bonded) with another compound, such as a compound to increase the half-life of the polypeptide (for example, polyethylene glycol), and (iv) antigenic peptides in which additional amino acids are fused to the antigenic peptide. Preparing and using such analogs, etc., are within the scope of those skilled in the art in view of the present application. The antigenic peptides additionally include antigenic peptides that have at least about 90% identity to the given antigenic peptide, and preferably at least about 95% identity to the antigenic peptide. The antigenic peptides additionally include antigenic peptides that contain at least five, six, seven or more consecutive amino acids that are identical to the given antigenic peptide, as well as antigenic peptides that contain at least six, seven, eight or more consecutive amino acids that are identical to the given antigenic except for one or two conservative changes within this such stretch of amino acids. The antigenic peptides of the present invention can be produced by peptide synthesis.

[130] **EXPRESSION PROFILES BASED ON PROTEINS:**

[131] An expression profile of a particular GPCR in one or more tissues can be made using antibodies or other binding partners produced using the antigenic peptides herein, then using traditional approaches such as Western blotting, immunohistochemistry analysis, protein array, ligand-binding studies, radioimmunoassay (RIA), and high performance liquid chromatography (HPLC), and immunohistochemistry analysis. H&E staining and other analyses can be used in combination with such immunologically-based analyses.

[132] **SCREENING FOR ACTIVITY:**

[133] The activity or functionality of an antigenic peptide can be measured using any of a variety of assays known in the art. Similarly, the specificity or affinity of an antibody or other binding partner made using the antigenic peptide can be measured using any of a variety of assays known in the art

[134] The activity or functionality of a particular GPCR may be measured using any of a variety of functional assays in which activation of the receptor in question results in an observable change in the level of some second messenger system, including but not limited to adenylyl cyclase, calcium mobilization, arachidonic acid release, ion channel activity, inositol phospholipid hydrolysis, or guanylyl cyclase. Heterologous expression systems utilizing appropriate host cells to express the nucleic acid of the subject invention are used to obtain the desired second messenger coupling. Receptor activity may also be assayed in an oocyte expression system.

[135] PROTEIN PURIFICATION:

[136] The antigenic peptides and proteins or polypeptides containing them can be purified by standard methods, including but not limited to salt or alcohol precipitation, preparative disc-gel electrophoresis, isoelectric focusing, high pressure liquid chromatography (HPLC), reversed-phase HPLC, gel filtration, cation and anion exchange, partition chromatography, and countercurrent distribution. Suitable purification methods will be readily apparent to those skilled in the art in view of the present application and are disclosed, *e.g.*, in Guide to Protein Purification, Methods in Enzymology, Vol. 182, M. Deutscher, Ed., Academic Press, New York, NY (1990). Purification steps can be followed as part of carrying out assays for ligand binding activity. Particularly where a particular GPCR is being isolated from a cellular or tissue source, it is preferable to include one or more inhibitors of proteolytic enzymes in the assay system, such as phenylmethylsulfonyl fluoride (PMSF).

E. CERTAIN ASSAYS, ANTIBODIES, PROBES, THERAPEUTICS, AND OTHER SYSTEMS AND ASPECTS, OF THE INVENTION

1. SYSTEMS AND METHODS FOR SCREENING FOR A PARTICULAR GPCR OR ANTIGENIC PEPTIDE

[137] SCREENING FOR ANTIGENIC PEPTIDES:

[138] As noted elsewhere herein, the present invention provides antigenic peptides and antibodies that are specific for a particular GPCR. The invention also provides systems and

methods for using or detecting such peptides, and antibodies against such peptides or corresponding GPCRs in a sample. The assays are based on the detection of the antigenic peptides, typically as they are displayed by the particular GPCR, or the detection of antibodies produced against the particular antigenic peptides and corresponding GPCRs.

[139] SCREENING FOR/WITH ANTIGENIC PEPTIDES:

[140] Many assays are characterized by the ability of antigenic peptides for a particular GPCR to be bound by antibodies against them, and the ability of antibodies produced against such antigenic peptides to bind to antigens or epitopes of the particular GPCR in a sample. Some exemplary assays are described below and elsewhere herein.

[141] LIST OF ASSAYS:

[142] A variety of assays can detect antibodies that bind specifically to the desired protein in or from a sample, or detect a desired protein bound to one or more antibodies in or from the sample. Exemplary assays are described in detail in Antibodies: A Laboratory Manual, Harlow and Lane (eds.), Cold Spring Harbor Laboratory Press (1988). Representative examples of such assays include: countercurrent immuno-electrophoresis (CIEP), radioimmunoassays, radioimmunoprecipitations, enzyme-linked immunosorbent assays (ELISA), dot blot assays, inhibition or competition assays, sandwich assays, immunostick (dip-stick) assays, simultaneous assays, immunochromatographic assays, immunofiltration assays, latex bead agglutination assays, immunofluorescent assays, biosensor assays, and low-light detection assays. *See* U.S. Pat. Nos. 4,376,110 and 4,486,530; WO 94/25597; WO/25598.

[143] ENZYME-LINKED IMMUNOSORBENT ASSAYS (ELISA):

[144] One assay for the detection of a particular GPCR is a sandwich assay such as an enzyme-linked immunosorbent assay (ELISA). In one preferred embodiment, the ELISA comprises the following steps: (1) coating the particular GPCR antigenic peptide onto a solid phase, (2) incubating a sample suspected of containing anti-particular GPCR antibodies with the antigenic peptide coated onto the solid phase under conditions that allow the formation of an antigen-antibody complex, (3) adding an anti-antibody (such as anti-IgG) conjugated with a label to be captured by the resulting antigen-antibody complex bound to the solid phase, and (4) measuring the captured label and determining therefrom whether the sample contains anti-particular GPCR antibodies.

[145] IMMUNOFLUORESCENCE ASSAY:

[146] A fluorescent antibody test (FA-test) uses a fluorescently labeled antibody able to bind to one of the proteins of the invention. For detection, visual determinations are made by a technician using fluorescence microscopy, yielding a qualitative result. In one embodiment, this assay is used for the examination of tissue samples or histological sections.

[147] **BEAD AGGLUTINATION ASSAYS:**

[148] In latex bead agglutination assays, antibodies to one or more of the antigenic peptides of the present invention are conjugated to latex beads. The antibodies conjugated to the latex beads are then contacted with a sample under conditions permitting the antibodies to bind to desired proteins in the sample, if any. The results are then read visually, yielding a qualitative result. In some embodiments, as with certain other assays, this format can be used in the field for on-site testing.

[149] **ENZYME IMMUNOASSAYS:**

[150] Enzyme immunoassays (EIA) include a number of different assays that can use the antibodies described in the present application. For example, a heterogeneous indirect EIA uses a solid phase coupled with an antibody of the invention and an affinity purified, anti-IgG immunoglobulin preparation. The solid phase can be a polystyrene microtiter plate. The antibodies and immunoglobulin preparation are then contacted with the sample under conditions permitting antibody binding, which conditions are well known in the art. The results of such an assay can be read visually or using a device such as a spectrophotometer, such as an ELISA plate reader, to yield a quantitative result. An alternative solid phase EIA format includes plastic-coated ferrous metal beads able to be moved during the procedures of the assay by means of a magnet. Yet another alternative is a low-light detection immunoassay format. In this highly sensitive format, the light emission produced by appropriately labeled bound antibodies are quantified automatically. Preferably, the reaction is performed using microtiter plates.

[151] In an alternative embodiment, a radioactive tracer is substituted for the enzyme-mediated detection in an EIA to produce a radioimmunoassay (RIA).

[152] **SANDWICH ASSAY:**

[153] In a capture-antibody sandwich enzyme assay, the desired protein is bound between an antibody attached to a solid phase, preferably a polystyrene microtiter plate, and a labeled antibody. The results can be measured, for example, using a spectrophotometer, such as an ELISA plate reader.

[154] **SEQUENTIAL AND SIMULTANEOUS ASSAYS:**

[155] In a sequential assay format, reagents are allowed to incubate with the capture antibody in a stepwise fashion. The test sample is first incubated with the capture antibody. Following a wash step, incubation with the labeled antibody occurs. In a simultaneous assay, the two incubation periods described in the sequential assay are combined. This eliminates one incubation period plus a wash step.

[156] **IMMUNOSTICK (DIP-STICK) ASSAYS:**

[157] A dipstick/immunostick format is essentially an immunoassay using a polystyrene paddle or dipstick instead of a polystyrene microtiter plate as the solid phase. Reagents are the same and the format can either be simultaneous or sequential.

[158] **IMMUNOCHROMATOGRAPHIC ASSAYS:**

[159] In a chromatographic strip test format, a capture antibody and a labeled antibody are dried onto a chromatographic strip, which typically comprises nitrocellulose or high porosity nylon bonded to cellulose acetate. The capture antibody is usually spray dried as a line at one end of the strip. At this end, there is an absorbent material that is in contact with the strip. At the other end of the strip, the labeled antibody is deposited in a manner that prevents it from being absorbed onto the membrane. Usually, the label attached to the antibody is a latex bead or colloidal gold. The assay may be initiated by applying the sample immediately in front of the labeled antibody.

[160] **IMMUNOFILTRATION ASSAYS:**

[161] Immunofiltration/immunoconcentration formats combine a large solid-phase surface with directional flow of sample/reagents, which concentrates and accelerates the binding of antigen to antibody. In an exemplary format, the test sample is preincubated with a labeled antibody, and then applied to a solid phase such as fiber filters, nitrocellulose membranes, or the like. The solid phase can also be precoated with latex or glass beads coated with capture antibody. Detection of analyte is the same as that in a standard immunoassay. The flow of sample/reagents can be modulated by either vacuum or the wicking action of an underlying absorbent material.

[162] **BIOSENSOR ASSAYS:**

[163] A threshold biosensor assay is a sensitive, instrumented assay amenable to screening large numbers of samples at low cost. In one embodiment, such an assay comprises the use of light-addressable potentiometric sensors wherein the reaction involves

the detection of a pH change due to binding of the desired protein by capture antibodies, bridging antibodies, and urease-conjugated antibodies. Upon binding, a pH change is effected that is measurable by translation into electrical potential (μvolts). The assay typically occurs in a very small reaction volume, and is very sensitive; the reported detection limit of the assay is 1,000 molecules of urease per minute.

2. ANTIBODIES

[164] ANTIBODIES GENERATED AGAINST A PARTICULAR ANTIGENIC PEPTIDE AND ITS CORRESPONDING GPCR:

[165] Highly specific, high affinity or antibodies against a particular GPCR or other polypeptide can be generated using the antigenic peptides herein and using antibody generation techniques as described herein or elsewhere. The antibodies produced using the antigenic peptides of the present invention, for example, have a specificity for the corresponding GPCR such that the antibodies can selectively detect the corresponding GPCR in a sample containing non-desired or contaminating proteins or polypeptides, such as a tissue or blood sample. Preferably, the antibodies have a high specificity such that no significant amounts of such proteins or polypeptides are detected, and further preferably have a specificity such that only insubstantial to essentially zero amounts of non-desirable proteins are detected. The antibodies produced using the antigenic peptides of the present invention, for example, typically have an affinity or avidity constant (Ka) of at least about 10^7 liters/mole, typically a high affinity or avidity at least about 10^9 liters/mole, preferably at least about 10^{10} liters/mole, and further preferably at least about 10^{11} liters/mole.

[166] The antibodies can be used to conduct immunohistochemistry and other analyses of a variety of tissue samples to determine expression of a particular GPCR in such tissues, for diagnostic assays, and for other desired purposes. The specification will now discuss a variety of antibody types, methods, uses, etc.

[167] ANTIBODIES GENERALLY:

[168] In some embodiments, the present invention provides antibodies and other binding partners created using the antigenic peptides herein and directed to a particular GPCR from which the antigenic peptides were derived. Compositions and uses for such antibodies are contemplated, including diagnostic, medicament, and therapeutic uses. Various diagnostic, medicament, and therapeutic uses for antibodies have been reviewed above and, for example,

in Goldenberg et al., Semin. Cancer Biol., 1(3):217-225 (1990); Beck et al., Semin. Cancer Biol., 1(3):181-188 (1990); Niman, Immunol. Ser., 53:189-204 (1990); Endo, Nippon Igaku Hoshasen Gakkai Zasshi (Japan), 50(8):901-909 (1990); and, U.S. Pat. No. 6,214,984.

[169] Recognized immunoglobulin genes include the kappa, lambda, alpha, gamma, delta, epsilon, and mu constant region genes, as well as myriad immunoglobulin variable region genes. Light chains are classified as either kappa or lambda. Heavy chains are classified as gamma, mu, alpha, delta, or epsilon, which in turn define the immunoglobulin classes, IgG, IgM, IgA, IgD, and IgE, respectively. An exemplary immunoglobulin (antibody) structural unit comprises a tetramer. Each tetramer is composed of two identical pairs of antigenic peptide chains, each pair having one "light" chain (about 25 kD) and one "heavy" chain (about 50-70 kD). The N-terminus of each chain defines a variable region of about 100 to 110 or more amino acids primarily responsible for antigen recognition. The terms variable light chain (V_L) and variable heavy chain (V_H) refer to these light and heavy chains respectively.

[170] ANTI-IDIOTYPIC ANTIBODIES:

[171] The present invention encompasses anti-idiotypic antibodies, including polyclonal and monoclonal anti-idiotypic antibodies, that are produced using the antibodies described herein as antigens. These anti-idiotypic antibodies are useful because they may mimic the structures of the antigenic peptides set forth herein.

[172] Techniques for producing antibodies, including antibody fragments, include the following.

a. Antibody Preparation

(i) Polyclonal Antibodies

[173] ANTIBODY PREP - POLYCLONAL:

[174] Polyclonal antibodies are generally raised in animals by multiple subcutaneous (sc) or intraperitoneal (ip) injections of the relevant antigen and an adjuvant. It may be useful to conjugate the relevant antigen to a protein that is immunogenic in the species to be immunized, *e.g.*, keyhole limpet hemocyanin, serum albumin, bovine thyroglobulin, or soybean trypsin inhibitor, using a bifunctional or derivatizing agent, for example, maleimidobenzoyl sulfosuccinimide ester (conjugation through cysteine residues), N-

hydroxysuccinimide (through lysine residues), glutaraldehyde, succinic anhydride, $SOCl_2$, or $R^1N=C=NR$, where R and R^1 are different alkyl groups.

[175] **ANTIBODY PREP – ADJUVANTS (ALL ABS):**

[176] Suitable adjuvants for the vaccination of animals for the production of polyclonal, monoclonal, and other antibodies include but are not limited to Adjuvant 65 (containing peanut oil, mannide monooleate, and aluminum monostearate); Freund's complete or incomplete adjuvant; mineral gels such as aluminum hydroxide, aluminum phosphate, and alum; surfactants such as hexadecylamine, octadecylamine, lysolecithin, dimethyldioctadecylammonium bromide, N,N-dioctadecyl-N',N'-bis(2-hydroxymethyl) propanediamine, methoxyhexadecylglycerol, and pluronic polyols; polyanions such as pyran, dextran sulfate, poly IC, polyacrylic acid, and carbopol; peptides such as muramyl dipeptide, dimethylglycine, tuftsin, stress proteins, core-containing proteins from a positive stranded RNA virus, *see* US Pat. No. 6,153,378; and, oil emulsions. The antigenic peptides could also be administered following incorporation into liposomes or other microcarriers.

[177] Information concerning adjuvants and various aspects of immunoassays are disclosed, *e.g.*, in the series by P. Tijssen, Practice and Theory of Enzyme Immunoassays, 3rd Edition (1987), Elsevier, New York. Other useful references covering methods for preparing polyclonal antisera include Microbiology, Hoeber Medical Division, Harper and Row (1969); Landsteiner, Specificity of Serological Reactions, Dover Publications, New York (1962); and, Williams, et al., Methods in Immunology and Immunochemistry, Vol. 1, Academic Press, New York (1967).

[178] Animals can be immunized against the antigen, immunogenic conjugates, or derivatives by combining 1 mg or 1 μg of the peptide or conjugate (for rabbits or mice, respectively) with 3 volumes of Freund's complete adjuvant and injecting the solution intradermally at multiple sites. One month later the animals are boosted with 1/5 to 1/10 the original amount of peptide or conjugate in Freund's complete adjuvant by subcutaneous injection at multiple sites. Seven to 14 days later the animals are bled and the serum is assayed for antibody titer. Animals are boosted until the titer plateaus. Preferably, the animal is boosted with the conjugate of the same antigen, but conjugated to a different protein or through a different cross-linking reagent. Conjugates also can be made in recombinant cell culture as protein fusions. In addition, aggregating agents such as alum can be suitably used to enhance the immune response.

(ii) Monoclonal Antibodies

[179] ANTIBODY PREP - MONOCLONAL:

[180] Monoclonal antibodies are obtained from a population of substantially homogeneous antibodies, *e.g.*, the individual antibodies comprising the population are identical except for possible naturally occurring mutations that may be present in minor amounts. For example, monoclonal antibodies can be made using the hybridoma method first described by Kohler and Milstein, Nature, 256:495 (1975), or can be made by recombinant DNA methods, or otherwise as desired.

[181] In the hybridoma method, a mouse, or other appropriate host animal, such as a hamster, is immunized as described herein to elicit lymphocytes that produce or are capable of producing antibodies that will bind specifically to the antigenic peptide used for immunization. Alternatively, lymphocytes may be immunized *in vitro*. Lymphocytes then are fused with myeloma cells using a suitable fusing agent, such as polyethylene glycol, to form a hybridoma cell, Goding, Monoclonal Antibodies: Principles and Practice, pp. 59-103, Academic Press (1986).

[182] The hybridoma cells thus prepared are seeded and grown in a suitable culture medium that preferably contains one or more substances that inhibit the growth or survival of the unfused, parental myeloma cells. For example, if the parental myeloma cells lack the enzyme hypoxanthine guanine phosphoribosyl transferase (HGPRT or HPRT), the culture medium for the hybridomas typically will include hypoxanthine, aminopterin, and thymidine (HAT medium), which substances prevent the growth of HGPRT-deficient cells.

[183] Preferred myeloma cells are those that fuse efficiently, support stable high-level production of antibody by the selected antibody-producing cells, and are sensitive to a medium such as HAT medium, for example murine myeloma lines, such as those derived from MOPC-21 and MPC-11 mouse tumors available from the Salk Institute Cell Distribution Center, San Diego, CA USA, and SP-2 cells available from the American Type Culture Collection, Rockville, MD USA. Human myeloma and mouse-human heteromyeloma cell lines have also been described for the production of human monoclonal antibodies, Kozbor, J. Immunol., 133:3001 (1984); Brodeur et al., Monoclonal Antibody Production Techniques and Applications, pp. 51-63, Marcel Dekker, Inc., New York (1987).

[184] Culture medium in which hybridoma cells are growing is assayed for production of monoclonal antibodies directed against the antigenic peptide. The binding specificity of monoclonal antibodies produced by hybridoma cells can be determined by immunoprecipitation or by an *in vitro* binding assay, such as radioimmunoassay (RIA) or enzyme-linked immunosorbent assay (ELISA). The binding affinity of the monoclonal antibody can, for example, be determined by the Scatchard analysis of Munson and Pollard, Anal. Biochem., 107:220 (1980). The antibodies produced using the antigenic peptides of the present invention, for example, typically have an affinity or avidity constant (Ka) of at least about 10^7 liters/mole, typically a high affinity or avidity at least about 10^9 liters/mole, preferably at least about 10^{10} liters/mole, and further preferably at least about 10^{11} liters/mole.

[185] After hybridoma cells are identified that produce antibodies of the desired specificity, affinity, or activity, the clones may be subcloned by limiting dilution procedures and grown by standard methods (Goding, *supra*). Suitable culture media for this purpose include, for example, D-MEM or RPMI-1640 medium. In addition, the hybridoma cells may be grown *in vivo* as ascites tumors in an animal.

[186] The monoclonal antibodies secreted by the subclones are suitably separated from the culture medium, ascites fluid, or serum by conventional immunoglobulin purification procedures such as, for example, protein A-SEPHAROSE™, hydroxyapatite chromatography, gel electrophoresis, dialysis, or affinity chromatography.

[187] DNA encoding the monoclonal antibodies can be readily isolated and sequenced using conventional procedures (*e.g.*, by using oligonucleotide probes that are capable of binding specifically to genes encoding the heavy and light chains of murine antibodies). The hybridoma cells serve as a preferred source of such DNA. Once isolated, the DNA may be placed into expression vectors, which can then be transfected into host cells such as *E. coli* cells, simian COS cells, Chinese hamster ovary (CHO) cells, or myeloma cells that do not otherwise produce immunoglobulin protein, to obtain the synthesis of monoclonal antibodies in the recombinant host cells. Review articles on recombinant expression in bacteria of DNA encoding antibody include Skerra et al., Curr. Opinion in Immunol., 5:256-262 (1993), and Pluckthun, Immunol. Revs., 130:151-188 (1992).

[188] **MOABS - COMBINATORIAL:**

[189] In a further embodiment, antibodies or antibody fragments can be isolated from antibody phage libraries generated using the techniques described in McCafferty et al.,

Nature, 348:552-554 (1990), using the proper antigen such as CD11a, CD18, IgE, or HER-2 to select for a suitable antibody or antibody fragment. Clackson et al., Nature, 352:624-628 (1991) and Marks et al., J. Mol. Biol., 222:581-597 (1991) describe the isolation of murine and human antibodies, respectively, using phage libraries. Subsequent publications describe the production of high affinity (nM range) human antibodies by chain shuffling, Marks et al., Biotechnology, 10:779-783 (1992), as well as combinatorial infection and *in vivo* recombination as strategies for constructing very large phage libraries, Waterhouse et al., Nuc. Acids. Res., 21:2265-2266 (1993). Combinatorial antibodies are also discussed in Huse et al., Science 246:1275-1281 (1989), and Sastry et al., Proc. Natl. Acad. Sci. USA, 86:5728-5732 (1989), and Alting-Mees et al., Strategies in Molecular Biology 3:1-9 (1990). These references describe a system commercially available from Stratacyte, La Jolla, CA USA. Briefly, mRNA is isolated from a B cell population and utilized to create heavy and light chain immunoglobulin cDNA expression libraries in the λIMMUNOZAP(H) and λIMMUNOZAP(L) vectors. These vectors may be screened individually or co-expressed to form Fab fragments or antibodies, *see* Huse et al., *supra*; *see also* Sastry et al., *supra*. Positive plaques can subsequently be converted to a non-lytic plasmid, which allows for high-level expression of monoclonal antibody fragments from *E. coli*.

[190] HUMANIZED MOAB:

[191] Binding partners can also be constructed utilizing recombinant DNA techniques to incorporate the variable regions of a gene that encode a specifically binding antibody. The construction of these binding partners can be readily accomplished by one of ordinary skill in the art in view of the present application. *See* Larrick et al., Biotechnology, 7:934-938 (1989); Riechmann et al., Nature, 332:323-327 (1988); Roberts et al., Nature, 328:731-734 (1987); Verhoeyen et al., Science 239:1534-1536 (1988); Chaudhary et al., Nature, 339:394-397 (1989); *see also* U.S. Pat. No. 5,132,405 entitled "Biosynthetic Antibody Binding Sites".) For example, the DNA can be modified by substituting the coding sequence for human heavy- and light-chain constant domains in place of homologous murine sequences, U.S. Pat. No. 4,816,567; Morrison, et al., Proc. Nat. Acad. Sci., 81:6851 (1984), or by covalently joining to the immunoglobulin coding sequence all or part of the coding sequence for a non-immunoglobulin polypeptide. In another example, DNA segments encoding the desired antigen-binding domains specific for the protein or peptide of interest are amplified from appropriate hybridomas and inserted directly into the genome of a cell that produces human

antibodies. *See* Verhoeyen et al., *supra*; *see also* Reichmann et al., *supra*. Some of these techniques transfer the antigen-binding site of a specifically binding mouse or rat monoclonal antibody or the like to a human antibody. Such antibodies can be preferable for therapeutic use in humans because they are typically not as antigenic as rat or mouse antibodies.

[192] In an alternative embodiment, genes that encode the variable region from a hybridoma producing a monoclonal antibody of interest can be amplified using oligonucleotide primers for the variable region. These primers may be synthesized by one of ordinary skill in the art, or may be purchased from commercially available sources. For instance, primers for mouse and human variable regions including, among others, primers for $V_{H}a$, $V_{H}b$, $V_{H}c$, $V_{H}d$, $C_{H}1$, V_{L} and C_{L} regions are available from Stratacyte (La Jolla, CA). These primers may be utilized to amplify heavy- or light-chain variable regions, which may then be inserted into vectors such as IMMUNOZAP^{TM}(H) or IMMUNOZAP^{TM}(L) (Stratacyte), respectively. These vectors may then be introduced into *E. coli* for expression. Utilizing these techniques, large amounts of a single-chain protein containing a fusion of the V_H and V_L domains may be produced, *see* Bird et al., Science 242:423-426 (1988).

[193] ANTIBODY SUBSTITUTIONS - NON-IMMUNOGLOBULIN POLYPEPTIDES (ALL ABS):

[194] Non-immunoglobulin polypeptides can be substituted in monoclonal and other antibodies described herein for the constant domains of an antibody, or they can be substituted for the variable domains of one antigen-combining site of an antibody to create a chimeric bivalent antibody comprising one antigen-combining site having specificity for an antigen and another antigen-combining site having specificity for a different antigen.

[195] CHIMERICS:

[196] Chimeric or hybrid antibodies can also be prepared *in vitro* using known methods in synthetic protein chemistry, including those involving crosslinking agents, in view of the present application. For example, immunotoxins may be constructed using a disulfide-exchange reaction or by forming a thioether bond. Examples of suitable reagents for this purpose include iminothiolate and methyl-4-mercaptobutyrimidate.

[197] ANTIBODY LABELING (ALL ABS):

[198] For diagnostic applications or otherwise as desired, and for monoclonal and other antibodies described herein, the antibodies and other binding partners typically will be labeled with a detectable moiety. The detectable moiety can be any moiety that is capable of

producing, either directly or indirectly, a detectable signal. For example, the detectable moiety may be a radioisotope, such as ^{3}H, ^{14}C, ^{32}P, ^{35}S, or ^{125}I; a fluorescent or chemiluminescent compound, such as fluorescein isothiocyanate, rhodamine, or luciferin; or an enzyme, such as alkaline phosphatase, beta-galactosidase, or horseradish peroxidase. Any method known in the art for conjugating the antibody or binding partner to the detectable moiety may be employed, including those methods described by Hunter et al., Nature, 144:945 (1962); David et al., Biochemistry, 13:1014 (1974); Pain et al., J. Immunol. Meth., 40:219 (1981); and Nygren, J. Histochem. Cytochem., 30:407 (1982).

(iii) Humanized And Human Antibodies

[199] HUMANIZED AB GENERALLY:

[200] Methods for humanizing non-human antibodies are well known in the art and have been discussed in part above. Generally, a humanized antibody has one or more amino acid residues introduced into it from a source which is non-human. These non-human amino acid residues are often referred to as "import" residues, which are typically taken from an "import" variable domain. Humanization can be performed essentially following the method of Winter and co-workers, Jones et al., Nature, 321:522-525 (1986); Riechmann et al., Nature, 332:323-327 (1988); Verhoeyen et al., Science, 239:1534-1536 (1988), by substituting rodent CDRs or CDR sequences for the corresponding sequences of a human antibody. Accordingly, such humanized antibodies are chimeric antibodies, U.S. Pat. No. 4,816,567, wherein substantially less than an intact human variable domain has been substituted by the corresponding sequence from a non-human species. In practice, humanized antibodies are typically human antibodies in which some CDR residues and possibly some FR residues are substituted by residues from analogous sites in rodent antibodies.

[201] The choice of human variable domains, both light and heavy, to be used in making humanized antibodies is very important to reduce antigenicity. According to the so-called "best-fit" method, the sequence of the variable domain of a rodent antibody is screened against the entire library of known human variable-domain sequences. The human sequence that is closest to that of the rodent is then accepted as the human framework (FR) for the humanized antibody. Sims et al., J. Immunol., 151:2296 (1993); Chothia and Lesk, J. Mol. Biol., 196:901 (1987). Another method uses a particular framework derived from the consensus sequence of all human antibodies of a particular subgroup of light or heavy chains.

The same framework may be used for several different humanized antibodies. Carter et al., Proc. Natl. Acad. Sci. USA, 89:4285 (1992); Presta et al., J. Immunol., 151:2623 (1993).

[202] It is typically desirable that antibodies be humanized with retention of high affinity for the antigen and other favorable biological properties. To achieve this goal, according to one method, humanized antibodies are prepared by a process of analysis of the parental sequences and various conceptual humanized products using three-dimensional models of the parental and humanized sequences. Three-dimensional immunoglobulin models are commonly available and are familiar to those skilled in the art. Computer programs are available that illustrate and display probable three-dimensional conformational structures of selected candidate immunoglobulin sequences. Inspection of these displays permits analysis of the likely role of the residues in the functioning of the candidate immunoglobulin sequence, *e.g.*, the analysis of residues that influence the ability of the candidate immunoglobulin to bind antigen. In this way, FR residues can be selected and combined from the consensus and import sequences so that the desired antibody characteristic, such as increased affinity for the target antigen(s), is achieved. In general, CDR residues are directly and most substantially involved in influencing antigen binding.

[203] It is also possible to produce transgenic animals (*e.g.*, mice) that are capable, upon immunization, of producing a full repertoire of human antibodies in the absence of endogenous immunoglobulin production. For example, it has been described that the homozygous deletion of the antibody heavy-chain joining region (J_H) gene in chimeric and germ-line mutant mice results in complete inhibition of endogenous antibody production. Transfer of the human germ-line immunoglobulin gene array in such germ-line mutant mice will result in the production of human antibodies upon antigen challenge. *See*, *e.g.*, Jakobovits et al., Proc. Natl. Acad. Sci. USA. 90:2551-255 (1993); Jakobovits et al., Nature, 362:255-258 (1993); Bruggemann et al., Year Immuno., 7:33 (1993). Human antibodies can also be produced in phage-display libraries, Hoogenboom and Winter, J. Mol. Biol., 227:381 (1991); Marks et al., J. Mol. Biol., 222:581 (1991).

(iv) Antibody Fragments

[204] ANTIBODY FRAGMENTS:

[205] Various techniques have been developed for the production of antibody fragments. Such fragments can be derived via proteolytic digestion of intact antibodies, *see*, *e.g.*,

Morimoto et al., J. Biochem. Biophys. Meth. 24:107-117 (1992) and Brennan et al., Science, 229:81 (1985). Fragments can also be produced directly by recombinant host cells. For example, antibody fragments can be isolated from antibody phage libraries discussed above. Fab'-SH fragments can be directly recovered from *E. coli* and chemically coupled to form $F(ab')_2$ fragments, Carter et al., Biotechnology 10:163-167 (1992). $F(ab')_2$ fragments can be isolated directly from recombinant host cell culture. Other techniques for the production of antibody fragments will be apparent to the skilled practitioner.

(v) Bispecific Antibodies

[206] BISPECIFIC ANTIBODIES GENERALLY:

[207] Bispecific antibodies (BsAbs) are antibodies that have binding specificities for at least two different antigens. Bispecific antibodies can be derived from full-length antibodies or from antibody fragments, *e.g.*, $F(ab')_2$ bispecific antibodies.

[208] Methods for making bispecific antibodies are known in the art. Traditional production of full-length bispecific antibodies is based on the coexpression of two immunoglobulin heavy chain-light chain pairs, where the two chains have different specificities, Millstein and Cuello, Nature, 305:537-539 (1983). Because of the random assortment of immunoglobulin heavy and light chains, these hybridomas (quadromas) produce a mixture of potentially 10 different antibody molecules, of which only one has the correct bispecific structure. Purification of the correct molecule, which is usually accomplished by affinity chromatography steps, is rather cumbersome, and the product yields are low. Similar procedures are disclosed in WO 93/08829, and in Traunecker et al., E.M.B.O. J., 10:3655-3659 (1991).

[209] According to another approach, antibody variable domains containing the desired binding specificities (antibody-antigen combining sites) are fused to immunoglobulin constant domain sequences. The fusion is preferably with an immunoglobulin heavy chain constant domain, comprising at least part of the hinge, C_H 2, and C_H 3 regions. It is preferred to have the first heavy-chain constant region (C_H 1) containing the site necessary for light chain binding, present in at least one of the fusions. DNAs encoding the immunoglobulin heavy chain fusions and, if desired, the immunoglobulin light chain, are inserted into separate expression vectors, and are co-transfected into a suitable host organism. This provides for great flexibility in adjusting the mutual proportions of the three polypeptide fragments in

embodiments when unequal ratios of the three polypeptide chains used in the construction provide the improved yields. It is, however, possible to insert the coding sequences for two or all three polypeptide chains in one expression vector when the expression of at least two polypeptide chains in equal ratios results in high yields or when the ratios are of no particular significance.

[210] ANTIBODIES - HYBRID IMMUNOGLOBULIN HEAVY CHAIN:

[211] In one embodiment of this approach, the bispecific antibodies are composed of a hybrid immunoglobulin heavy chain with a first binding specificity in one arm, and a hybrid immunoglobulin heavy chain-light chain pair (providing a second binding specificity) in the other arm. This asymmetric structure may facilitate the separation of the desired bispecific compound from unwanted immunoglobulin chain combinations, as the presence of an immunoglobulin light chain in only one half of the bispecific molecule provides for a facile method of separation. This approach is discussed in WO 94/04690. For further details of generating bispecific antibodies see, for example, Suresh et al., Meth. Enzymol., 121:210 (1986).

[212] ANTIBODIES - CROSS-LINKED OR "HETEROCONJUGATE":

[213] Bispecific antibodies include cross-linked or "heteroconjugate" antibodies. For example, one of the antibodies in the heteroconjugate can be coupled to avidin, the other to biotin. Such antibodies have, for example, been proposed to target immune system cells to unwanted cells, U.S. Pat. No. 4,676,980), and for treatment of HIV infection, WO 91/00360, WO 92/200373, and EP 03089). Heteroconjugate antibodies may be made using any convenient cross-linking methods. Suitable cross-linking agents are well known in the art, and are disclosed in U.S. Pat. No. 4,676,980, along with a number of cross-linking techniques.

[214] ANTIBODIES - DIABODIES:

[215] The "diabody" technology described by Hollinger et al., Proc. Natl. Acad. Sci. USA, 90:6444-6448 (1993) has provided an alternative mechanism for making BsAb fragments. The fragments comprise a heavy-chain variable domain (V_H) connected to a light-chain variable domain (V_L) by a linker that is too short to allow pairing between the two domains on the same chain. Accordingly, the V_H and V_L domains of one fragment are forced to pair with the complementary V_L and V_H domains of another fragment, thereby forming two antigen-binding sites.

[216] Another strategy for making BsAb fragments by the use of single-chain Fv (sFv) dimers has also been reported. *See* Gruber et al., J. Immunol., 152:5368 (1994). These researchers designed an antibody comprising the V_H and V_L domains of a first antibody joined by a 25-amino-acid-residue linker to the V_H and V_L domains of a second antibody. The refolded molecule bound to fluorescein and the T-cell receptor and redirected the lysis of human tumor cells that had fluorescein covalently linked to their surface.

[217] **ANTIBODIES - OTHER:**

[218] Techniques for generating bispecific antibodies from antibody fragments have also been described in the literature. For example, bispecific antibodies can be prepared using chemical linkage. Brennan et al., Science, 229:81 (1985) describe a procedure wherein intact antibodies are proteolytically cleaved to generate $F(ab')_2$ fragments. These fragments are reduced in the presence of the dithiol complexing agent sodium arsenite to stabilize vicinal dithiols and prevent intermolecular disulfide formation. The Fab' fragments generated are then converted to thionitrobenzoate (TNB) derivatives. One of the Fab'-TNB derivatives is then reconverted to the Fab'-thiol by reduction with mercaptoethylamine and is mixed with an equimolar amount of the other Fab'-TNB derivative to form the BsAb. The BsAbs produced can be used as agents for the selective immobilization of enzymes.

[219] Fab'-SH fragments can be directly recovered from *E. coli*, which can be chemically coupled to form bispecific antibodies. Shalaby et al., J. Exp. Med., 175:217-225 (1992) describe the production of a fully humanized BsAb $F(ab')_2$ molecule. Each Fab' fragment was separately secreted from *E. coli* and subjected to directed chemical coupling *in vitro* to form the BsAb. The BsAb thus formed was able to bind to cells overexpressing the HER2 receptor and normal human T cells, as well as trigger the lytic activity of human cytotoxic lymphocytes against human breast tumor targets. *See also* Rodriguez et al., Int. J. Cancers (Suppl.) 7:45-50 (1992).

[220] Various techniques for making and isolating BsAb fragments directly from recombinant cell culture have also been described. For example, bispecific $F(ab')_2$ heterodimers have been produced using leucine zippers. Kostelny et al., J. Immunol., 148(5):1547-1553 (1992). The leucine zipper peptides from the Fos and Jun proteins are linked to the Fab' portions of two different antibodies by gene fusion. The antibody homodimers are reduced at the hinge region to form monomers and then re-oxidized to form the antibody heterodimers.

b. Antibody Purification

[221] **ANTIBODY PURIFICATION GENERALLY:**

[222] When using recombinant techniques, the antibody can be produced intracellularly, in the periplasmic space, or directly secreted into the medium. If the antibody is produced intracellularly, as a first step, the particulate debris, either host cells or lysed fragments, is removed, for example, by centrifugation or ultrafiltration. Carter et al., Bio/Technology 10:163-167 (1992), describe a procedure for isolating antibodies which are secreted to the periplasmic space of *E. coli*. Briefly, cell paste is thawed in the presence of sodium acetate (pH 3.5), EDTA, and phenylmethylsulfonylfluoride (PMSF) over about 30 min. Cell debris can be removed by centrifugation. Where the antibody is secreted into the medium, supernatants from such expression systems are generally first concentrated using a commercially available protein concentration filter, for example, an Amicon or Millipore Pellicon ultrafiltration unit. A protease inhibitor such as PMSF may be included in any of the foregoing steps to inhibit proteolysis and antibiotics may be included to prevent the growth of adventitious contaminants.

[223] **BEFORE LPHIC:**

[224] The antibody composition prepared from the cells is preferably subjected to at least one purification step prior to LPHIC. Examples of suitable purification steps include hydroxyapatite chromatography, gel electrophoresis, dialysis, and affinity chromatography. The suitability of protein A as an affinity ligand depends on the species and isotype of any immunoglobulin Fc domain that is present in the antibody. Protein A can be used to purify antibodies that are based on human $\gamma1$, $\gamma2$, or $\gamma4$ heavy chains, Lindmark et al., J. Immunol. Meth. 62:1-13 (1983). Protein G has been recommended for mouse isotypes and for human $\gamma3$, Guss et al., E.M.B.O. J., 5:1567-1575 (1986). The matrix to which the affinity ligand is attached is often agarose, but other matrices are available. Mechanically stable matrices such as controlled pore glass or poly(styrenedivinyl)benzene allow for faster flow rates and shorter processing times than can be achieved with agarose. Where the antibody comprises a C_H3 domain, the Bakerbond ABX™ resin (J. T. Baker, Phillipsburg, N.J.) is useful for purification. Other techniques for protein purification such as fractionation on an ion-exchange column, ethanol precipitation, Reverse Phase HPLC, chromatography on silica, chromatography on heparin SEPHAROSE™, chromatography on an anion or cation

exchange resin (such as a polyaspartic acid column), chromatofocusing, SDS-PAGE, and ammonium sulfate precipitation are also available depending on the antibody to be recovered.

[225] **LPHIC:**

[226] Following any preliminary purification step(s), the mixture comprising the antibody of interest and contaminant(s) can be subjected to LPHIC. *See* US Patent No. 6,214,984. Often, the antibody composition to be purified will be present in a buffer from the previous purification step. However, it may be necessary to add a buffer to the antibody composition prior to the LPHIC step. Many buffers are available and can be selected by routine experimentation. The pH of the mixture comprising the antibody to be purified and at least one contaminant in a loading buffer is adjusted to a pH of about 2.5-4.5 using either an acid or base, depending on the starting pH. The loading buffer can have a low salt concentration (*e.g.*, less than about 0.25 M salt).

[227] The mixture is loaded on the HIC column. HIC columns normally comprise a base matrix (*e.g.*, cross-linked agarose or synthetic copolymer material) to which hydrophobic ligands (*e.g.*, alkyl or aryl groups) are coupled. One example of an HIC column comprises an agarose resin substituted with phenyl groups (*e.g.*, a Phenyl SEPHAROSE™ column). Many HIC columns are available commercially. Examples include, but are not limited to, Phenyl SEPHAROSE 6 FAST FLOW™ column with low or high substitution (Pharmacia LKB Biotechnology, AB, Sweden); Phenyl SEPHAROSE™ High Performance column (Pharmacia LKB Biotechnology, AB, Sweden); Octyl SEPHAROSE™ High Performance column (Pharmacia LKB Biotechnology, AB, Sweden); FRACTOGEL™ EMD Propyl or FRACTOGEL™ EMD Phenyl columns (E. Merck, Germany); MACRO-PREP™ Methyl or MACRO-PREP™ t-Butyl Supports (Bio-Rad, California); WP HI-Propyl (C_3)™ column (J. T. Baker, New Jersey); and TOYOPEARL™ ether, phenyl, or butyl columns (TosoHaas, PA).

[228] The antibody is typically eluted from the column using an elution buffer that is the same as the loading buffer. The elution buffer can be selected using routine experimentation in view of the present application. The pH of the elution buffer may be between about 2.5-4.5 and have a low salt concentration (*e.g.*, less than about 0.25 M salt). It may not be necessary to use a salt gradient to elute the antibody of interest; the desired product may be recovered in the flow-through fraction that does not bind significantly to the column.

[229] The LPHIC step provides a way to remove a correctly folded and disulfide bonded antibody from unwanted contaminants (*e.g.*, incorrectly associated light and heavy fragments). The method can provide an approach to substantially remove an impurity characterized as a correctly folded antibody fragment whose light and heavy chains fail to associate through disulfide bonding. Antibody compositions prepared using LPHIC can be up to about 95% pure or more. Purities of more than about 98% have been reported. US Patent No. 6,214,984.

[230] **POST LPHIC:**

[231] Antibody compositions prepared by LPHIC can be further purified as desired using techniques which are well known in the art. Diagnostic or therapeutic formulations of the purified protein can be made by providing the antibody composition in a physiologically acceptable carrier, examples of which are provided below. To remove contaminants (*e.g.*, unfolded antibody and incorrectly associated light and heavy fragments) from the HIC column so that it can be re-used, a composition including urea (*e.g.*, 6.0 M urea, 1% MES buffer pH 6.0, 4 mM ammonium sulfate) can be flowed through the column.

c. Some Uses For Antibodies Described Herein

(i) Generally

[232] **GENERALLY:**

[233] The present invention comprises any suitable use for the antibodies and other binding partners discussed herein. The following provides some of the desired uses, including diagnostic and therapeutic uses. Various diagnostic and therapeutic uses for antibodies have been reviewed in Goldenberg et al., Semin. Cancer Biol., 1(3):217-225 (1990); Beck et al., Semin. Cancer Biol., 1(3):181-188 (1990); Niman, Immunol. Ser. 53:189-204 (1990); and, Endo, Nippon Igaku Hoshasen Gakkai Zasshi (Japan) 50(8):901-909 (1990), for example.

[234] **ASSAYS:**

[235] The antibodies can be used in immunoassays, such as enzyme immunoassays. BsAbs can be useful for this type of assay; one arm of the BsAb can be designed to bind to a specific epitope on the enzyme so that binding does not cause enzyme inhibition, the other arm of the antibody can be designed to bind to an immobilizing matrix ensuring a high enzyme density at the desired site. Examples of such diagnostic BsAbs include those having

specificity for IgG as well as ferritin, and those having binding specificities for horseradish peroxidase (HRP) as well as a hormone, for example. Monoclonal and polyclonal antibodies are also exemplary antibodies for immunoassays.

[236] The antibodies can be designed for use in two-site immunoassays. For example, two antibodies are produced binding to two separate epitopes on the analyte protein; one antibody binds the complex to an insoluble matrix, the other binds an indicator enzyme.

[237] DIAGNOSTIC USES:

[238] Antibodies can also be used for immunodiagnosis, *in vitro* or *in vivo* or otherwise, of various diseases or conditions based on the presence or absence of a particular GPCR. Such diseases and conditions include, *e.g.*, immune-related diseases, cell growth-related diseases, cell regeneration-related diseases, immunological-related cell proliferative diseases, and autoimmune diseases. Examples of specific diseases include AIDS, allergies, Alzheimer's disease, amyotrophic lateral sclerosis, atherosclerosis, bacterial, fungal, protozoan and viral infections, benign prostatic hypertrophy, bone diseases (*e.g.*, osteoarthritis, osteoporosis), carcinoma (*e.g.*, basal cell carcinoma, breast carcinoma, embryonal carcinoma, ovarian carcinoma, renal cell carcinoma, lung adenocarcinoma, lung small cell carcinoma, pancreatic carcinoma, prostate carcinoma, transitional carcinoma of the bladder, squamous cell carcinoma, thyroid carcinoma), cardiomyopathy, chronic and acute inflammation, circadian rhythm disorders, COPD, Crohn's disease, diabetes, Duchenne muscular dystrophy, embryonal carcinoma, endotoxic shock, environmental stress (*e.g.*, by heat, UV or chemicals), gastrointestinal disorders, glioblastoma multiform, graft vs. host disease, Hodgkin's disease, inflammatory bowel disease, ischemia, stroke, lymphoma, macular degeneration, malignant cytokine production, malignant fibrous histiocytoma, melanoma, meningioma, mesothelioma, multiple sclerosis, nasal congestion, pain, Parkinson's disease, prostate carcinoma, psoriasis, rhabdomyosarcoma, psychotic or neurological disorders (*e.g.*, anxiety, depression, schizophrenia, dementia, mental retardation, memory loss, epilepsy, locomotor problems, respiratory disorders, asthma, eating/body weight disorders including obesity, bulimia, diabetes, anorexia, nausea, hypertension, hypotension), renal disorders, reperfusion injury, rheumatoid arthritis, sarcoma (*e.g.*, chondrosarcoma, Ewing's sarcoma, osteosarcoma), septicemia, seminoma, sexual/reproductive disorders, tonsil, transitional carcinoma of the bladder, transplant rejection, trauma, tuberculosis, ulcers, ulcerative colitis, urinary retention, vascular and

cardiovascular disorders, or any other disease or disorder in which G protein-coupled receptors are involved, as well as learning and/or memory disorders, diabetes, pain perception disorders, anorexia, obesity, hormonal release problems, or any other disease or disorder in which a specific GPCR is involved.

[239] To facilitate this diagnostic use, an antibody that binds a particular GPCR, when such is differentially expressed in tumors or other target diseases, can be conjugated with a detectable marker (*e.g.*, a chelator that binds a radionuclide). Examples of tumor-associated antigens being used in a similar fashion include an antibody having specificity for the tumor-associated antigen CEA used for imaging colorectal and thyroid carcinomas and the anti-$p185^{HER2}$ antibody used for detecting cancers characterized by amplification of the HER2 protooncogene. Other uses for the antibodies of the present invention will be apparent to the skilled practitioner in view of the present application.

(ii) Assays

[240] ASSAYS:

[241] For certain applications such as some diagnostic and other assay applications, the antibody typically can be labeled directly or indirectly with a detectable moiety. The detectable moiety can be any moiety that is capable of producing, either directly or indirectly, a detectable signal. For example, the detectable moiety may be a radioisotope, such as ^{3}H, ^{14}C, ^{32}P, ^{35}S, or ^{125}I; a fluorescent or chemiluminescent compound, such as fluorescein isothiocyanate, rhodamine, or luciferin; or an enzyme, such as alkaline phosphatase, beta-galactosidase, or HRP.

[242] Any method known in the art for separately conjugating the antibody to the detectable moiety may be employed, including those methods described by Hunter et al., Nature, 144:945 (1962); David et al., Biochemistry, 13:1014 (1974); Pain et al., J. Immunol. Meth. 40:219 (1981); and, Nygren, J. Histochem. and Cytochem. 30:407 (1982).

[243] The antibodies of the present invention may be employed in any desired assay method, such as competitive binding assays, direct, and indirect sandwich assays, and immunoprecipitation assays. Zola, Monoclonal Antibodies: A Manual of Techniques, pp. 147-158 (CRC Press, Inc. (1987).

[244] COMPETITIVE BINDING ASSAYS:

[245] Competitive binding assays rely on the ability of a labeled standard to compete with the test sample analyte for binding with a limited amount of antibody. The amount of analyte in the test sample is inversely proportional to the amount of standard that becomes bound to the antibody. To facilitate determining the amount of standard that becomes bound, the antibody generally is insolubilized before or after the competition, so that the standard, and analyte that are bound to the antibody may conveniently be separated from the standard, and analyte which remain unbound.

[246] BsAbs are particularly useful for sandwich assays which involve the use of two molecules, each capable of binding to a different immunogenic portion, or epitope, of the sample to be detected. In a sandwich assay, the test sample analyte is bound by a first arm of the antibody which is immobilized on a solid support, and thereafter a second arm of the antibody binds to the analyte, thus forming an insoluble three part complex. *See, e.g.*, U.S. Pat. No. 4,376,110. The second arm of the antibody may itself be labeled with a detectable moiety (direct sandwich assays) or may be measured using an anti-immunoglobulin antibody that is labeled with a detectable moiety (indirect sandwich assay). For example, one type of sandwich assay is an ELISA assay, in which case the detectable moiety is an enzyme. Assays are discussed further elsewhere herein in relation to binding partners such as antibodies, and antigenic peptides for particular GPCRs, including assays searching for or using such antigenic peptides, and would be apparent to those skilled in the art in view of the present application.

(iii) Affinity Purification

[247] **AFFINITY PURIFICATION:**

[248] The antibodies also are useful for the affinity purification of an antigen of interest such as a particular GPCR from sources such as recombinant cell culture or natural sources.

(iv) Therapeutics

[249] **THERAPEUTIC USES:**

[250] Therapeutic compositions, and uses, etc., for the antibodies described herein will now be discussed. As with other parts of this application, this section does not contain the entire discussion of therapeutic uses or compositions, etc., for antibodies; other sections discuss both antibodies, and therapeutics, and the discussion in this section applies to certain

other aspects discussed herein. Turning to antibodies and therapeutics, the antibodies can be used, for example, for redirected cytotoxicity (*e.g.*, to kill tumor cells), as a vaccine adjuvant, for delivering thrombolytic agents to clots, for delivering immunotoxins to tumor cells, for converting enzyme activated prodrugs at a target site (*e.g.*, a tumor), for treating infectious diseases or targeting immune complexes to cell surface receptors.

[251] THERAPEUTIC FORMULATIONS:

[252] Therapeutic formulations of the antibody can be prepared for storage by mixing the antibody having the desired degree of purity with optional physiologically acceptable carriers, excipients, or stabilizers (Remington's Pharmaceutical Sciences, 16th edition, Osol, A., Ed. (1980), for example in the form of lyophilized cake or aqueous solutions. Acceptable carriers, excipients, or stabilizers are nontoxic to recipients at the dosages, and concentrations employed, and include buffers such as phosphate, citrate, and other organic acids; antioxidants including ascorbic acid; low molecular weight (less than about 10 residues) polypeptides; proteins, such as serum albumin, gelatin, or immunoglobulins; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, arginine, or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrins; chelating agents such as EDTA; sugar alcohols such as mannitol or sorbitol; salt-forming counterions such as sodium; or nonionic surfactants such as Tween, Pluronics, or polyethylene glycol (PEG).

[253] The antibodies also may be entrapped in microcapsules prepared, for example, by coacervation techniques or by interfacial polymerization (for example, hydroxymethylcellulose or gelatin-microcapsules, and poly-[methylmethacrylate] microcapsules, respectively), in colloidal drug delivery systems (for example, liposomes, albumin microspheres, microemulsions, nano-particles, and nanocapsules), or in macroemulsions. Such techniques are disclosed in Remington's Pharmaceutical Sciences, *supra*.

[254] THERAPEUTIC FORMULATIONS -STERILE:

[255] An antibody to be used for *in vivo* human administration should be sterile. This can be accomplished by filtration through sterile filtration membranes, for example prior to or following lyophilization and reconstitution. The antibody ordinarily will be stored in lyophilized form or in solution. Therapeutic antibody compositions generally are placed into

a container having a sterile access port, for example, an intravenous solution bag or vial having a stopper pierceable by a hypodermic injection needle.

[256] THERAPEUTIC ADMINISTRATIONS:

[257] The route of antibody administration is in accord with known methods, *e.g.*, injection or infusion by intravenous, intraperitoneal, intracerebral, intramuscular, intraocular, intraarterial, or intralesional routes, or by sustained release systems as noted below.

[258] The antibody can be administered, for example, continuously by infusion or by bolus injection. Suitable examples of sustained-release preparations include semipermeable matrices of solid hydrophobic polymers containing the protein, which matrices are in the form of shaped articles, *e.g.*, films, or microcapsules. Examples of sustained-release matrices include polyesters, hydrogels (*e.g.*, poly(2-hydroxyethyl-methacrylate) as described by Langer et al., J. Biomed. Mater. Res., 15:167-277 (1981), and Langer, Chem. Tech., 12:98-105 (1982), or poly(vinylalcohol)), polylactides, U.S. Pat. No. 3,773,919; EP 58,481, copolymers of L-glutamic acid and gamma ethyl-L-glutamate, Sidman et al., Biopolymers, 22:547-556 (1983), non-degradable ethylene-vinyl acetate, Langer et al., *supra*, degradable lactic acid-glycolic acid copolymers such as the LUPRON DEPOT™ (injectable microspheres composed of lactic acid-glycolic acid copolymer and leuprolide acetate), and poly-D-(-)-3-hydroxybutyric acid, EP 133,988.

[259] THERAPEUTIC ADMINISTRATIONS – SUSTAINED RELEASE-POLYMERS:

[260] While polymers such as ethylene-vinyl acetate and lactic acid-glycolic acid sustain release of molecules for over 100 days, certain hydrogels release proteins for shorter time periods. When encapsulated antibodies remain in the body for a long time, they may denature or aggregate as a result of exposure to moisture at 37°C, resulting in a loss of biological activity and possible changes in immunogenicity. Rational strategies can be devised for antibody stabilization depending on the mechanism involved. For example, if the aggregation mechanism is discovered to be intermolecular S--S bond formation through thio-disulfide interchange, stabilization may be achieved by modifying sulfhydryl residues, lyophilizing from acidic solutions, controlling moisture content, using appropriate additives, and developing specific polymer matrix compositions.

[261] THERAPEUTIC ADMINISTRATIONS – SUSTAINED RELEASE-LIPOSOMES:

[262] Sustained-release antibody compositions also include liposomally entrapped antibody. Liposomes containing the antibody can be prepared by methods such as those in DE 3,218,121; Epstein et al., Proc. Natl. Acad. Sci. USA, 82:3688-3692 (1985); Hwang et al., Proc. Natl. Acad. Sci. USA, 77:4030-4034 (1980); EP 52,322; EP 36,676; EP 88,046; EP 143,949; EP 142,641; Japanese patent application 83-118008; U.S. Pat. Nos. 4,485,045 and 4,544,545; and EP 102,324. Ordinarily the liposomes are of the small (about 200-800 Angstroms) unilamellar type in which the lipid content is greater than about 30 mol. % cholesterol, the selected proportion being adjusted for the optimal antibody therapy.

[263] THERAPEUTICALLY EFFECTIVE AMOUNT:

[264] An effective amount of antibody to be employed therapeutically will depend, for example, upon the therapeutic objectives, the route of administration, and the condition of the patient. Accordingly, it will be necessary for the therapist to titer the dosage and modify the route of administration as required to obtain the optimal therapeutic effect. A typical daily dosage might range from about 1 μg/kg to up to 10 mg/kg or more, depending on the factors mentioned above. Typically, the clinician will administer antibody until a dosage is reached that achieves the desired effect. The progress of this therapy is easily monitored by conventional assays.

5. DRUG DESIGN BASED ON THE ANTIGENS HEREIN OR ANTIBODIES THERETO

[265] DISEASE/CONDITIONS LIST:

[266] The peptides and antibodies of the present invention can serve as valuable tools for designing drugs for treating various pathophysiological conditions such as immune-related diseases, cell growth-related diseases, cell regeneration-related diseases, immunological-related cell proliferative diseases, and autoimmune diseases. Examples of specific diseases include AIDS, allergies, Alzheimer's disease, amyotrophic lateral sclerosis, atherosclerosis, bacterial, fungal, protozoan and viral infections, benign prostatic hypertrophy, bone diseases (*e.g.*, osteoarthritis, osteoporosis), carcinoma (*e.g.*, basal cell carcinoma, breast carcinoma, embryonal carcinoma, ovarian carcinoma, renal cell carcinoma, lung adenocarcinoma, lung small cell carcinoma, pancreatic carcinoma, prostate carcinoma, transitional carcinoma of the bladder, squamous cell carcinoma, thyroid carcinoma), cardiomyopathy, chronic and acute inflammation, circadian rhythm disorders, COPD, Crohn's disease, diabetes, Duchenne

muscular dystrophy, embryonal carcinoma, endotoxic shock, environmental stress (*e.g.*, by heat, UV or chemicals), gastrointestinal disorders, glioblastoma multiform, graft vs. host disease, Hodgkin's disease, inflammatory bowel disease, ischemia, stroke, lymphoma, macular degeneration, malignant cytokine production, malignant fibrous histiocytoma, melanoma, meningioma, mesothelioma, multiple sclerosis, nasal congestion, pain, Parkinson's disease, prostate carcinoma, psoriasis, rhabdomyosarcoma, psychotic or neurological disorders (*e.g.*, anxiety, depression, schizophrenia, dementia, mental retardation, memory loss, epilepsy, locomotor problems, respiratory disorders, asthma, eating/body weight disorders including obesity, bulimia, diabetes, anorexia, nausea, hypertension, hypotension), renal disorders, reperfusion injury, rheumatoid arthritis, sarcoma (*e.g.*, chondrosarcoma, Ewing's sarcoma, osteosarcoma), septicemia, seminoma, sexual/reproductive disorders, tonsil, transitional carcinoma of the bladder, transplant rejection, trauma, tuberculosis, ulcers, ulcerative colitis, urinary retention, vascular and cardiovascular disorders, or any other disease or disorder in which G protein-coupled receptors are involved, as well as learning and/or memory disorders, diabetes, pain perception disorders, anorexia, obesity, hormonal release problems, or any other disease or disorder in which a specific GPCR is involved or that would be readily apparent to those skilled in the art in view of the present application.

EXAMPLES

[267] The Examples below provide information as follows: Example 1 relates to the identification and selection of the antigens set forth in Figure 2. Examples 2 to 4 relate to antibody production and purification based on such antigens. Examples 5 to 10 relate to H&E staining. And, Example 11 relates to Western blot analyses.

EXAMPLE 1: SELECTION OF ANTIGENS

[268] Antigenic peptides were derived from the amino acid sequence of a particular GPCR based on analyses of likely antigen-containing regions and specificity of those regions for the protein/gene of interest. The specificity of the antigen peptides (approximately 20 amino acids in length) for antibody generation was determined using the outlined techniques, including BLAST of several public databases. These public databases included but were not limited to GenBank, Swiss Prot Human, Swiss Prot NonHuman, GenPeptH, GenPept M, and

LifeSpan's proprietary databases. With respect to specificity, parameters that precluded the use of a particular peptide included the presence of 6 or more contiguous amino acids with sequence identity to protein(s) other than the protein of interest, the presence of sites of posttranslational modification, including phosphorylation and glycosylation, and highly hydrophobic sequences, which could indicate potential *in situ* localization within the plasma membrane. The peptides were analyzed for antigenicity using the published algorithm of Hopp, T. P., and Woods, K. R, Proc. Natl. Acad. Sci. U.S.A. 78, 3824-3828, (1981). Additional considerations in antigenic peptide design included 1) selection against sequences with multiple prolines in a row, 2) selection against sequences with multiple serines in a row, 3) selection against sequences with multiple lysines in a row, 4) selection against sequences with multiple arginines in a row 5) selection against sequences with multiple aspartic acids in a row, 6) selection against sequences with multiple glutamic acids in a row, 7) selection against peptides containing methionine or tryptophan, which can become oxidized as a result of the cyclization reaction, and 8) avoidance of stretches of 5 or more amino acids having no uncharged amino acids (which also resulted in a desirable charge to peptide length ratio of at least 1 charge:5 residues). The selected antigenic peptides are set forth in the Sequence Listing and in Figure 2.

EXAMPLE 2: ANTIBODY PRODUCTION SCHEDULE

[269] Day 0 - Pre-immune serum collection (approximately 5.0 ml). Immunize using 200 μg antigen peptide per rabbit in Complete Freund's Adjuvant.

[270] Day 14 – Immunize using 100 μg antigen per rabbit in Incomplete Freund's Adjuvant.

[271] Day 28 - Immunize using 100 μg antigen per rabbit in Incomplete Freund's Adjuvant.

[272] Day 42 - Immunize using 100 μg antigen per rabbit in Incomplete Freund's Adjuvant.

[273] Day 49 - First production bleed; obtain 24.0 - 26.0 ml.

[274] Day 56 - Immunize using 100 μg antigen per rabbit in Incomplete Freund's Adjuvant.

[275] Day 63 - Second production bleed and ELISA analysis.

[276] Day 70 - Immunize using 100 μg antigen per rabbit in Incomplete Freund's Adjuvant.

[277] Day 77 - Third production bleed and affinity purification.

EXAMPLE 3: IMMUNOSORBENT PURIFICATION OF ANTISERUM: COUPLING OF PEPTIDE TO CNBR-ACTIVATED SEPHAROSE 4B

[278] Weigh out 0.8 g of CNBr-activated Sepharose 4B (2.5 ml of final gel volume). Wash and re-swell on sintered glass filter with 1 mM HCl, followed by coupling buffer (0.1 M $NaHCO_3$, 0.25 M NaCl, pH 8.5). Dissolve 10 mg of protein or peptide in coupling buffer. Mix protein solution with gel suspension and incubate 2 hours at room temperature or overnight at 4°C. Block remaining active groups with 0.2 M glycine buffer, pH 8.1. Wash away excess adsorbed protein with coupling buffer, followed by 0.1 M acetate buffer containing 0.5 M NaCl, pH 4.3. Equilibrate the column with phosphate-buffered saline (PBS), pH 7.7.

EXAMPLE 4: IMMUNOSORBENT PURIFICATION OF ANTISERUM: AFFINITY PURIFICATION OF ANTISERUM

[279] Dilute 10 ml of clear antiserum 1:1 with PBS, pH 7.7, apply to affinity column at a flow rate of 0.3 ml/minute, and monitor absorbance of eluate at 280 nm. Collect fractions of unbound material and rinse column with PBS, pH 7.7. Elute bound antibody with 0.2 M glycine, pH 1.85, and collect eluate until absorbance at 280 nm returns to baseline. Neutralize all collected fractions with 1 M Tris-HCl, pH 8.5 immediately after collection. Determine OD at 280 nm, and determine the total OD recovered. Conduct ELISA analysis with the corresponding antigen to confirm the presence and identity of recovered antibody and the removal of all antibody from the original serum. Concentrate antibody to approximately 2.0 mg/ml and dialyze against PBS with 0.01% NaN_3.

EXAMPLE 5: PREPARATION OF ANTIBODY DILUTIONS

[280] The purpose of this protocol is to dilute antibodies in solution. Materials include Tris-HCL Buffer with carrier protein and 0.015 M NaN_3 (Dako Antibody Diluent #S0809 (DAKO, Carpentaria, CA); vials containing the antibodies described above or commercial antibodies against the particular GPCR; pipetmen and disposable tips; container of chopped ice; 12 ml Dako reagent tubes; and, reagent tube rack.

[281] The procedure is a) calculate proportions of antibody and diluent according to desired concentrations and volume requirements; b) label reagent tubes and place in rack; c) pipette needed volume of diluent into tube(s); d) place vials of antibodies into ice; e) invert and/or flick antibody vial(s) 3 or 4 times to insure suspension; f) pipette required volume of antibody(s) into corresponding diluent volumes; and, g) mix gently.

EXAMPLE 6: PREPARATION OF AUTOSTAINER SOLUTIONS

[282] The purpose of this protocol is the preparation of concentrated solutions for use in a DAKO autostainer. Materials include DAKO® TBST (Tris Buffered Saline Containing Tween-S3306), 10X Concentrate, DAKO® Target Retrieval Solution, 10x Concentrate (S1699), deionized H_2O, 20L container, with lid, marked at the 10L level, DAKO® TBS (Tris Buffered Saline-S1968), and DAKO Tween® (S1966).

[283] The procedure to make TBST 10x Concentrate is a) pour 2 500 ml bottles DAKO® TBST into a 20 L container, b) add deionized H_2O until solution level is at 10 L mark, c) replace lid and shake 10 to 20 times, d) pour diluted DAKO® TBST into autostainer carboy(s) as designated. The procedure to make Target Retrieval Solution is a) measure 135 ml of deionized H_2O and pour into slide bath, b) measure 15 ml of DAKO® Target Retrieval solution, c) add to H_2O, and d) agitate. This solution is then used in the steam method of target retrieval, Example 9, below. The procedure to make TBS is a) fill 20L container to 10L mark with deionized H_2O, b) add 2 envelopes of DAKO® TBS, c) add 5 ml of DAKO TWEEN®, and d) replace lid and agitate 10 to 20 times.

EXAMPLE 7: PREPARATION OF SOLUTIONS FOR ANTIBODY DETECTION

[284] Solutions for antibody detection are prepared using Vector® Biotinylated antibody (BA series), Vectastain® ABC-AP Kit (AK-5000), 10 mM sodium phosphate, pH 7.5, 0.9% saline (PBS), Vector® Red Alkaline Phosphatase Substrate Kit I (SK-5100), and 100 mM Tris-HCl, pH 8.2 Buffer. To prepare biotinylated antibody, add 10 ml of PBS to reagent tube, add 1 drop biotinylated antibody to the PBS, then mix gently. To prepare ABC, to 10 ml of PBS, add 2 drops each of Reagent A and Reagent B, mix immediately, then allow to stand 30 minutes before use. To prepare AP Red, which should be prepared immediately

before use, to 5 ml of Tris-HCl buffer, add 2 drops of Reagent 1 and mix well, add 2 drops of Reagent 2 and mix well, then add 2 drops of Reagent 3 and mix well.

EXAMPLE 8: DEPARAFFINIZATION AND REHYDRATION OF SAMPLES

[285] The purpose of this protocol is to remove paraffin from and rehydrate preserved tissues in preparation for IHC procedures. Materials and equipment include fume hood, vertical slide rack(s), three xylene (VWR #72060-088) baths, three 100% alcohol blend (VWR #72060-050) baths, two 95% alcohol blend (VWR #72060-052) baths, one 70% alcohol blend (VWR #72060-056) bath, and Tris-Buffered Saline (DAKO® S1968) + Tween® (DAKO S1966).

[286] Insert the slides into the vertical rack(s). Move slides through baths inside fume hood as follows:

Xylene 5 Minutes
Xylene 5 Minutes
Xylene 5 Minutes
100% Alcohol 2 Minutes
100% Alcohol 2 Minutes
100% Alcohol 1 Minute
95% Alcohol 2 Minutes
95% Alcohol 2 Minutes
70% Alcohol 1 Minute

[287] Finally, place slides into a container with TBST.

EXAMPLE 9: STEAM METHOD OF TARGET RETRIEVAL

[288] The purpose of this protocol is to optimize antibody binding within paraffin embedded tissues. Materials and equipment included a steamer, deionized H_2O, target retrieval solution, 10X concentrate (DAKO #S1699), 250 ml graduated cylinder, 15 ml graduated cylinder, staining dish(es), and deparaffinized and rehydrated tissue on microscope slides in immersed TBST. The procedure is to a) fill the steamer with deionized H_2O to appropriate depth as indicated, b) turn the steamer on, c) in a graduated cylinder, measure 135ml of deionized H_2O and pour into staining dish(es), d) pipette 15ml of target retrieval solution and release into deionized H_2O, e) place the staining dish(es) into the basket of the steamer and heat for at least 10 minutes to preheat, f) add rack(s) containing tissue slides to heated target retrieval solution, g) cover and steam for 20 minutes, h) remove container from

steamer and let stand at room temperature for 20 minutes, i) transfer rack(s) with slides to container(s) of TBST, and j) slides are now ready for staining procedures.

EXAMPLE 10: ANTIBODY DETECTION

[289] The deparaffinized, rehydrated, and steamed (if needed) slides are loaded onto racks within a DAKO autostainer and then the autostainer is run according to the manufacturer's instructions. The slides are removed and the autostainer is turned off.

EXAMPLE 11: WESTERN BLOTTING

[290] The purpose of this protocol is to visualize the immunoreactivity of the antibodies described above against the particular GPCR on a western blot. Materials and equipment included western blot membrane, TBS Tween (TBST: 100 mM Tris-HCl pH 7.5, 150 mM NaCl, 0.1% Tween™ 20), 5% non-fat dried milk in TBST (blotto), antibody of interest (primary), peroxidase-conjugated AffiniPure goat anti-rabbit IgG (H+L) (secondary) – Jackson ImmunoResearch, ECL solution (Amersham Biosciences, Uppsala Sweden), film, developer D-19, fixer, rocking platform.

[291] During the blotting procedure, the blot is kept wet at all times and on a substantially level surface. The Western blot is placed right-side up in 10 ml of blotto. The membrane is flipped over and the dish rocked so that the solution covered it. The membrane is then flipped back to the right side and solution is again rocked over it. The blot is then placed on a shaker for at least 1 hour. Ten ml of primary antibody are prepared by diluting 1:500 in blotto.

[292] The blotto is removed from the Western blot and replaced with the primary antibody. The blot is flipped again and placed on the shaker for 1 hour. Secondary antibody and peroxidase-conjugated AffiniPure goat anti-rabbit IgG (H+L) are prepared 1:20,000 in 10 ml of blotto. The primary antibody is removed and the Western blot is washed 3 times with 10 ml of blotto. The blotto is removed and replaced with the secondary antibody solution. The blot is flipped and placed on the shaker for 1 hour. The secondary antibody is removed and the blot washed 2 times with 10 ml of blotto. The blotto is removed and the blot is washed 2 times with 10 ml TBST. ECL is prepared by combining equal amounts of Solution 1 and 2.

[293] The blotto is removed and 1 ml of ECL is placed on the blot. The blot is flipped and let sit for 1 minute. The blot is placed on plastic wrap and immediately covered with plastic wrap. The ECL is pressed out. The blot is placed on the film, then the film is developed.

[294] From the foregoing, it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention includes all permutations and combinations of the subject matter set forth herein and is not limited except as by the appended claims.

WHAT IS CLAIMED IS:

1. An isolated antigenic peptide according to any one of SEQ ID NOS. 692-2292.

2. An isolated antigenic peptide comprising an amino acid sequence that is at least about 90% identical to a sequence set forth in any one of SEQ ID NOS. 692-2292.

3. An isolated antigenic peptide that is an analog of an antigenic peptide according to any one of SEQ ID NOS. 692-2292.

4. An isolated antigenic peptide comprising a short antigenic amino acid sequence that is identical to at least 5 consecutive amino acids set forth in any one of SEQ ID NOS. 692-2292.

5. An isolated antigenic peptide comprising a short antigenic amino acid sequence that is identical to or contains no more than one conservative amino acid substitution over at least 7 consecutive amino acids set forth in any one of SEQ ID NOS. 692-2292.

6. A kit for the detection of antibodies against a particular GPCR in a sample comprising:

a) an isolated antigenic peptide according to any one of claims 1-5 and derived from the particular GPCR, and

b) at least one of a reagent or a device for detecting the antibodies.

7. An isolated antibody having high specificity and high affinity or avidity for a particular GPCR comprising a peptide sequence that is identical to any one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372, wherein the antibody was produced using an isolated antigenic peptide comprising the peptide sequence that is identical to the any one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372.

8. An isolated antibody having high specificity and high affinity or avidity for a particular GPCR comprising a peptide sequence that is at least about 90% identical to any

one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372, wherein the antibody was produced using the peptide sequence that is at least about 90% identical to the any one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372.

9. An isolated antibody having high specificity and high affinity or avidity for a particular GPCR comprising a peptide sequence that is an analog to any one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372, wherein the antibody was produced using an isolated antigenic peptide comprising the peptide sequence that is the analog to the any one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372.

10. An isolated antibody having high specificity and high affinity or avidity for a particular GPCR comprising a peptide sequence that is identical to at least 5 consecutive amino acids set forth any one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372, wherein the antibody was produced using a short isolated antigenic peptide comprising the at least 5 consecutive amino acids set forth in the any one of SEQ ID NOS. 692-703, 713-730, 744-802, 807-820, 825-875, 880-889, 917-941, 950-964, 971-984, 989-993, 1010-1013, 1021-1024, 1029-1043, 1049-1052, 1057-1072, 1087-1113, 1124-1151, 1161-1172, 1179-1187, 1198-1209, 1228-1231, 1245-1257, 1271-1279, 1304-1308, 1369-1372.

11. An isolated antibody specific for a particular GPCR comprising a peptide sequence that is identical to any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028,

1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292, wherein the antibody was produced using an isolated antigenic peptide comprising the peptide sequence that is identical to the any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028, 1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292.

12. An isolated antibody specific for a particular GPCR comprising a peptide sequence that is at least about 90% identical to any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028, 1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292, wherein the antibody was produced using the peptide sequence that is at least about 90% identical to the any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028, 1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292.

13. An isolated antibody specific for a particular GPCR comprising a peptide sequence that is an analog to any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028,

1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292, wherein the antibody was produced using an isolated antigenic peptide comprising the peptide sequence that is the analog to the any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028, 1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292.

14. An isolated antibody specific for a particular GPCR comprising a peptide sequence that is identical to at least 5 consecutive amino acids set forth any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028, 1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292, wherein the antibody was produced using a short isolated antigenic peptide comprising the at least 5 consecutive amino acids set forth in the any one of SEQ ID NOS. 704-712, 731-743, 774-777, 803-806, 821-824, 876-879, 890-916, 942-949, 965-970, 985-988, 994-1009, 1014-1020, 1025-1028, 1044-1048, 1053-1056, 1073-1086, 1114-1123, 1152-1160, 1173-1178, 1188-1197, 1210-1227, 1232-1244, 1258-1270, 1280-1303, 1309-1368, 1373-1377, 1386-1389, 1394-1402, 1462-1482, 1496-1525, 1542-1549, 1557-1563, 1583-1649, 1656-1679, 1684-1688, 1693-1732, 1744-1752, 1765-1839, 1846-1854, 1855-1866, 1871-1917, 1926-1941, 1952-1955, 1960-1980, 1985-2141, 2152-2165, and 2170-2292.

15. A kit for the detection of antibodies against the particular GPCR of claim 5 comprising:

a) an isolated antibody according to any one of claims 7-14, and

b) at least one of a reagent or a device for detecting the antibody.

16. An assay for the detection of a particular GPCR in a sample, comprising:

a) providing an isolated antigenic peptide according to any one of claims 1-5,

b) contacting the isolated antigenic peptide with the sample under conditions suitable and for a time sufficient for the antigenic peptide to bind to one or more antibodies specific for the particular GPCR present in the sample, to provide an antibody-bound antigenic peptide, and

c) detecting the antibody-bound antigenic peptide, and therefrom determining whether the sample contains the particular GPCR.

17. The assay of claim 16 further comprising the step of binding the isolated antigenic peptide or the antibody to a solid substrate.

18. The assay of claim 16 or 17 wherein the sample is an unpurified sample.

19. The assay of any one of claims 15-18 further comprising, prior to the contacting, obtaining the sample from a human being.

20. The assay of any one of claims 15-19 wherein the assay is selected from the group consisting of a countercurrent immuno-electrophoresis (CIEP) assay, a radioimmunoassay, a radioimmunoprecipitation, an enzyme-linked immuno-sorbent assay (ELISA), a dot blot assay, an inhibition or competition assay, a sandwich assay, an immunostick (dip-stick) assays, a simultaneous assay, an immunochromatographic assay, an immunofiltration assay, a latex bead agglutination assay, an immunofluorescent assay, a biosensor assay, and a low-light detection assay.

21. An isolated nucleic acid molecule encoding an antigenic peptide according to any one of SEQ ID NOS. 692-2292.

22. The isolated nucleic acid molecule according to claim 21 wherein the molecule encodes a naturally occurring human antigenic peptide.

23. An isolated nucleic acid molecule encoding an antigenic peptide that is at least about 90% identical to any one of the antigenic peptides set forth in SEQ ID NOS. 692-2292.

24. The isolated nucleic acid molecule according to claim 23 wherein the antigenic peptide is at least about 95% identical to the antigenic peptide.

25. The isolated nucleic acid molecule according to claim 23 or 24 wherein the molecule encodes a naturally occurring human antigenic peptide.

26. A process for producing an isolated polynucleotide comprising hybridizing a nucleotide encoding an antigenic peptide according to any one of SEQ ID NOS. 692-2292 to genomic DNA under highly stringent conditions and isolating the polynucleotide detected with the nucleotide.

27. A method of identifying an amino acid sequence for an antigenic peptide from a candidate polypeptide sequence wherein the antigenic peptide has a length of about 5 to about 100 amino acids, the method comprising:

a) searching the candidate polypeptide sequence using a comparison window of the length, and

b) selecting against amino acid sequences of the length and having at least 3 characteristics selected from the group consisting of 1) at least two consecutive prolines, 2) at least two consecutive serines, 3) at least two consecutive lysines, 4) at least two consecutive arginines, 5) at least two consecutive aspartic acids, 6) at least two consecutive glutamic acids, 7) methionine, 8) tryptophan, and 9) at least five consecutive amino acids comprising no charged amino acids.

28. The method of claim 27 wherein the method further comprises selecting against at least 5 of the characteristics.

29. The method of claim 27 wherein the method further comprises selecting against at least 7 of the characteristics.

30. The method of claim 27 wherein the method further comprises selecting against the 9 characteristics.

31. The method of any one of claims 27-30 wherein the method further comprises:

c) selecting against amino acid sequences of the length and having at least one of the following additional characteristics 1) sequences having at least 5 consecutive amino acids that are identical to an alternative amino acid sequence from an alternative polypeptide that is different from the candidate polypeptide, 2) posttranslational modification sites, and 3) highly hydrophobic sequences.

32. The method of claim 31 wherein the posttranslational modification sites are phosphorylation or glycosylation sites.

33. The method of claim 31 or 32 wherein the method further comprises selecting against at least 2 of the additional characteristics.

34. The method of claim 31 or 32 wherein the method further comprises selecting against the 3 additional characteristics.

35. The method of any one of claims 27-34 wherein the method further comprises performing a BLAST-type or a FAST-type analyses for the candidate polypeptide sequence.

36. The method of any one of claims 27-34 wherein the method further comprises performing a BLAST analysis for the candidate polypeptide sequence.

37. The method of any one of claims 27-36 wherein the antigenic peptide has a length from 6 amino acids to about 50 amino acids.

38. The method of any one of claims 27-36 wherein the antigenic peptide has a length from 6 amino acids to about 20 amino acids.

39. The method of any one of claims 27-36 wherein the antigenic peptide has a length of about 20 amino acids.

40. The method of any one of claims 27-39 wherein the polypeptide is a protein.

41. The method of any one of claims 27-40 wherein the polypeptide is a human protein.

42. The method of any one of claims 27-41 wherein the polypeptide is a naturally occurring protein.

43. An isolated antigenic peptide that is specific for the candidate polypeptide of any one of claims 27-42 that is produced according to the method of any one of claims 27-42.

44. An antigenic peptide that is at least about 90% identical to the isolated antigenic peptide of claim 43.

45. An isolated antigenic peptide that is an analog of the isolated antigenic peptide of claim 43.

46. An isolated antigenic peptide comprising a short antigenic amino acid sequence that is identical to at least 5 consecutive amino acids of the isolated antigenic peptide of claim 43.

47. An isolated antigenic peptide comprising a short antigenic amino acid sequence that is identical to or contains no more than one conservative amino acid substitution over at least 7 consecutive amino acids of the isolated antigenic peptide of claim 43.

48. A kit for the detection of antibodies against the candidate polypeptide of any one of claims 43-47 in a sample comprising:

a) an isolated antigenic peptide according to any one of claims 43-47 and derived from the candidate polypeptide, and

b) at least one of a reagent or a device for detecting the antibodies.

49. An isolated antibody specific for a candidate polypeptide comprising an amino acid sequence that is identical to the amino acid sequence of the isolated antigenic peptide of claim 43, wherein the antibody was produced using the isolated antigenic peptide of claim 43.

50. An isolated antibody specific for a candidate polypeptide comprising an amino acid sequence that is identical to the amino acid sequence of the isolated antigenic peptide of claim 44, wherein the antibody was produced using the isolated antigenic peptide of claim 44.

51. An isolated antibody specific for a candidate polypeptide comprising an amino acid sequence that is identical to the amino acid sequence of the isolated antigenic peptide of claim 45, wherein the antibody was produced using the isolated antigenic peptide of claim 45.

52. An isolated antibody specific for a candidate polypeptide comprising an amino acid sequence that is identical to the amino acid sequence of the isolated antigenic peptide of claim 46, wherein the antibody was produced using the isolated antigenic peptide of claim 46.

53. An isolated antibody specific for a candidate polypeptide comprising an amino acid sequence that is identical to the amino acid sequence of the isolated antigenic peptide of claim 47, wherein the antibody was produced using the isolated antigenic peptide of claim 47.

54. The isolated antibody of any one of claims 49-53 wherein the antibody has high specificity and high affinity for the candidate polypeptide.

55. A kit for the detection of antibodies against the candidate polypeptide of any one of claims 43-47 comprising:

a) an isolated antibody according to any one of claims 49-53, and

b) at least one of a reagent or a device for detecting the antibody.

56. An assay for the detection of a candidate polypeptide in a sample, comprising:

a) providing an isolated antigenic peptide according to any one of claims 43-47,

b) contacting the isolated antigenic peptide with the sample under conditions suitable and for a time sufficient for the antigenic peptide to bind to one or more antibodies specific for the candidate polypeptide present in the sample, to provide an antibody-bound antigenic peptide, and

c) detecting the antibody-bound antigenic peptide, and therefrom determining whether the sample contains the candidate polypeptide.

57. The assay of claim 56 further comprising the step of binding the isolated antigenic peptide or the antibody to a solid substrate.

58. The assay of claim 56 or 57 wherein the sample is an unpurified sample.

59. The assay of any one of claims 56-58 further comprising, prior to the contacting, obtaining the sample from a human being.

60. The assay of any one of claims 56-59 wherein the assay is selected from the group consisting of a countercurrent immuno-electrophoresis (CIEP) assay, a radioimmunoassay, a radioimmunoprecipitation, an enzyme-linked immuno-sorbent assay (ELISA), a dot blot assay, an inhibition or competition assay, a sandwich assay, an immunostick (dip-stick) assays, a simultaneous assay, an immunochromatographic assay, an immunofiltration assay, a latex bead agglutination assay, an immunofluorescent assay, a biosensor assay, and a low-light detection assay.

61. An isolated nucleic acid molecule encoding an antigenic peptide according to any one of claims 43-47.

62. The isolated nucleic acid molecule according to claim 61 wherein the molecule encodes a naturally occurring human antigenic peptide.

63. An isolated nucleic acid molecule encoding an antigenic peptide that is at least about 90% identical to any one of the antigenic peptides set forth in claims 43-47.

64. The isolated nucleic acid molecule according to claim 63 wherein the antigenic peptide is at least about 95% identical to the antigenic peptide.

65. The isolated nucleic acid molecule according to claim 63 or 64 wherein the molecule encodes a naturally occurring human antigenic peptide.

66. A process for producing an isolated polynucleotide comprising hybridizing a nucleotide encoding an antigenic peptide according to any one of claims 43-47 to genomic DNA under highly stringent conditions and isolating the polynucleotide detected with the nucleotide.

SEQ ID NO:	LSID	Gene	Source ID	Sequence	Code	SpeciesName
526	160397	Latrophilin-2	NP_036434.1	MVSSGCRMRS LWFIIVISFL PNTEGFSRAA LPFGLVRREL SCEGYSIDLR CPGSDVIMIE SANYGRTDDK ICDADPFQME NTDCYLPDAF KIMTQRCNNR TQCIVVTGSD VFPDPCPGTY KYLEVQYECV PYIFVCPGTL KAIVDSPCIY EAEQKAGAWC KDPLQAADKI YFMPWTPYRT DTLIEYASLE DFQNSRQTTT YKLPNRVDGT GFVVYDGAVF FNKERTRNIV KFDLRTRIKS GEAIINYANY HDTSPYRWGG KTDIDLAVDE NGLWVIYATE QNNGMIVISQ LNPYTLRFEA TWETVYDKRA ASNAFMICGV LYVVRSVYQD NESETGKNSI DYIYNTRLNR GEYVDVPFPN QYQYIAAVDY NPRDNQLYVW NNNFILRYSL EFGPPDPAQV PTTAVTITSS AELFKTIIST TSTTSQKGPM STTVAGSQEG SKGTKPPPAV STTKIPPITN IFPLPERFCE ALDSKGIKWP QTQRGMMVER PCPKGTRGTA SYLCMISTGT WNPKGPDLSN CTSHWVNQLA QKIRSGENAA SLANELAKHT KGPVFAGDVS SSVRLMEQLV DILDAQLQEL KPSEKDSAGR SYNKAIVDTV DNLLRPEALE SWKHMNSSEQ AHTATMLLDT LEEGAFVLAD NLLEPTRVSM PTENIVLEVA VLSTEGQIQD FKFPLGIKGA GSSIQLSANT VKQNSRNGLA KLVFIIYRSL GQFLSTENAT IKLGADFIGR NSTIAVNSHV ISVSINKESS RVYLTDPVLF TLPHIDPDNY FNANCSFWNY SERTMMGYWS TQGCKLVDTN KTRTTCACSH LTNFAILMAH REIAYKDGVH ELLLTVITWV GIVISLVCLA ICIFTFCFFR GLQSDRNTIH KNLCINLFIA EFIFLIGIDK TKYAIACPIF AGLLHFFFLA AFAWMCLEGV QLYLMLVEVF ESEYSRKKYY YVAGYLFPAT VVGVSAAIDY KSYGTEKACW LHVDNYFIWS FIGPVTFIIL LNIIFLVITL CKMVKHSNTL KPDSSRLENI KSWVLGAFAL LCLLGLTWSF GLLFINEETI VMAYLFTIFN AFQGVFIFIF HCALQKKVRK EYGKCFRHSY CCGGLPTESP HSSVKASTTR TSARYSSGTQ SRIRRMWNDT VRKQSESSFI SGDINSTSTL NQGHSLNNAR DTSAMDTLPL NGNFNNSYSL HKGDYNDSVQ VVDCGLSLND TAFEKMIISE LVHNNLRGSS KTHNLELTLP VKPVIGGSSS EDDAIVADAS SLMHSDNPGL ELHHKELEAP LIPQRTHSLL YQPQKKVKSE GTDSYVSQLT AEAEDHLQSP NRDSLYTSMP NLRDSPYPES SPDMEEDLSP SRRSENEDIY YKSMPNLGAG HQLQMCYQIS RGNSDGYIIP INKEGCIPEG DVREGQMQLV TSL	P	Homo sapiens
527	160411	G Protein-Coupled Receptor GPR48	NM_018490	ccgcggctgg gagacagcga gccagagtct gggtgtttgt gcgagagcca cggcgggggc tggggcgagt ggccggcatg gctgaaggct gcgctctgca accttgaaga gccgctgcat tgagaggcca gggacaggga gaccggtgcg atggcagagc gcggcccccg ccgctgcgcc gggccggccc ggctggcctg agccgccgga ggagcggggc tgcctctgcg cgtccatgga gcagcgggaa gggcgaaact ccggagcgcc gcgtccctgc gccgctgcgg cggactgctg aaggggccga gcccgcgcgg accgccgagg aagagacccc cgctccagcc cgcaggccgg ctgcccgggg gcggcggggg acatcggagg gcagcggagc gagcagcgcc gcgggagagg ccggcgcggg aggcggccgc agcaatgccg ggcccgctag ggctgctctg cttcctcgcc ctgggggctgc tcggctcggc cgggcccagc ggcgcggcgc cgcctctctg cgcggcgccc tgcagctgcg acggcgaccg tcgggtggac tgctccggga aggggctgac ggccgtgccc gaggggctca gcgccttcac ccaagcgctg gatatcagta tgaacaacat tactcagttg ccagaagatg catttaagaa ctttcctttt ctagaagagc tacaattggc gggcaacgac ctttctttta tccacccaaa ggccttgtct gggttgaaag aactcaaagt tctaacgctc cagaataatc agttgaaaac agtacccagt gaagccattc gagggctgag tgctttgcag tctttgcgtt tagatgccaa ccatattacc tcagtccccg aggacagttt tgaaggactt	A	Homo sapiens

gttcagttac ggcatctgtg gctggatgac aacagcttga cggaggtgcc tgtgcacccc ctcagcaatc tgcccacccct
acaggcgctg accctggctc tcaacaagat ctcaagcatc cctgactttg catttaccaa cctttcaagc ctggtagttc tgcatcttca
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cacaagataa agaacagctg ttaatatttt ttaaaaatct attttaaaat gtgattttct ataactgaag aaaatatctt gctaatttta
cctaatgttt catccttaat ctcaggacaa cttactgcag ggccaaaaaa gggactgtcc cagctagaac tgtgagagta
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ttaattagac gaaacgggga gtaattatga cacgaagtac ttatgtttat ttcttagtga gctggattat cttgaacctg tgctattaaa
tggaaatttc catacatctt ccccatacta tttttataa aagagcctat tcaatagctc agaggttgaa ctctggttaa acaagataat

				atgttattaa taaaaataga agaagaaaga ataaagctta gtcctgtgtc tttaaaaatt aaaaatttta cttgattccc atctatgggc tttagaccta ttactgggtg gagtcttaaa gttataattg ttcaatatgt tttttgaaca gtgtgctaaa tcaatagcaa acccactgcc atattagtta ttctgaatat actaaaaaaa tccagctaga ttgcagttta ataattaaac tgtacatact gtgcatataa tgaattttta tcttatgtaa attattttta gaacacaagt tgggaaatgt ggcttctgtt catttcgttt aattaaagct acctcctaaa ctatagtggc tgccagtagc agactgttaa attgtggttt atatactttt tgcattgtaa atagtctttg ttgtacattg tcagtgtaat aaaaacagaa tctttgtata tcaaaatcat gtagtttgta taaaatgtgg gaaggattta tttacagtgt gttgtaattt tgtaaggcca actatttaca agttttaaaa attgctatca tgtatattta cacatctgat aaatattaaa tcataacttg gtaagaaact cctaattaaa aggtttttc caaaattcag gttattgaaa atttttcatt ttattcattt aaaaactaga ataacagata tataaaagtg ttaatctttg tgctatatgg tatgaaatac aatattgtac tcagtgtttt gaattattaa agtttctaga aagcaaaaaa a		
528	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	MPGPLGLLCF LALGLLGSAG PSGAAPPLCA APCSCDGDRR VDCSGKGLTA VPEGLSAFTQ ALDISMNNIT QLPEDAFKNF PFLEELQLAG NDLSFIHPKA LSGLKELKVL TLQNNQLKTV PSEAIRGLSA LQSLRLDANH ITSVPEDSFE GLVQLRHLWL DDNSLTEVPV HPLSNLPTLQ ALTLALNKIS SIPDFAFTNL SSLVVLHLHN NKIRGLSQHC FDGLDNLETL DLSYNNLGEF PQAIKARPSL KELGFHSNSI SVIPDGAFDG NPLLRTIHLY DNPLSFVGNS ASHNLSDLHS LVIRGASMVQ QFPNLTGTVH LESLTLTGTK ISSIPNNLCQ EQKMLRTLDL SYNNIRDLPS FNGCHALEEI SLQRNQIYQI KEGTFQGLIS LRILDLSRNL IHEIHSRAFA TLGPITNLDV SFNELTSFPT EGPNGLNQLK LVGNFKLKEA LAAKDFVNLR SLSVPYAYQC CAFWGCDSYA NLNTEDNSLQ DHSVAQEKGT ADAANVTSTL ENEEHSQIII HCTPSTGAFK PCEYLLGSWM IRLTVWFIFL VALFFNLLVI LTTFASCTSL PSSKLFIGLI SVSNLFMGIY TGILTFLDAV SWGRFAEFGI WWETGSGCKV AGFLAVFSSE SAIFLLMLAT VERSLSAKDI MKNGKSNHLK QFRVAALSAF LGATVAGCFP LFHRGEYSAS PLCLPFPTGE TPSLGFTVTL VLLNSLAFLL MAVIYTKLYC NLEKEDLSEN SQSSMIKHVA WLIFTNCIFF CPVAFFSFAP LITAISISPE IMKSVTLIFF PLPACLNPVL YVFFNPKFKE DWKLLKRRVT KKSGSVSVSI SSQGGCLEQD FYYDCGMYSH LQGNLTVCDC CESFLLTKPV SCKHLIKSHS CPALAVASCQ RPEGYWSDCG TQSAHSDYAD EEDSFVSDSS DQVQACGRAC FYQSRGFPLV RYAYNLPRVK D	P	Homo sapiens
529	160435	LS160435 Receptor	AX147830	aactggaagg gcagccgtct gccgcccacg aacaccttct caagcacttt gagtgaccac ggcttgcaag ctggtggctg gcccccgag tcccgggctc tgaggcacgg ccgtcgactt aagcgttgca tcctgttacc tggagaccct ctgagctctc acctgctact tctgccgctg cttctgcaca gagcccgggc gaggacccct ccaggatgca ggtcccgaac agcaccggcc cggacaacgc gacgctgcag atgctgcgga acccggcgat cgcggtggcc ctgcccgtgg tgtactcgct ggtggcggcg gtcagcatcc cgggcaacct cttctctctg tgggtgctgt gccggcgcat ggggcccaga tcccgtcgg tcatcttcat gatcaacctg agcgtcacgg acctgatgct ggccagcgtg ttgcctttcc aaatctacta ccattgcaac cgccaccact gggtattcgg ggtgctgctt tgcaacgtgg tgaccgtggc cttttacgca aacatgtatt ccagcatcct caccatgacc tgtatcagcg tggagcgctt cctgggggtc ctgtacccgc tcagctccaa gcgctggcgc cgccgtcgtt acgcggtggc cgcgtgtgca gggacctggc tgctgctcct gaccgccctg tccccgctgg cgcgcaccga tctcacctac ccggtgcacg ccctgggcat catcacctgc ttcgacgtcc tcaagtggac gatgctcccc agcgtggcca tgtgggccgt gttcctcttc accatcttca tcctgctgtt cctcatcccg ttcgtgatca ccgtggcttg ttacacggcc accatcctca agctgttgcg cacggaggag gcgcacggcc gggagcagcg gaggcgcgcg gtgggcctgg ccgcggtggt cttgctggcc tttgtcacct	A	Homo sapiens

				gcttcgcccc caacaacttc gtgctcctgg cgcacatcgt gagccgcctg ttctacggca agagctacta ccacgtgtac aagctcacgc tgtgtctcag ctgcctcaac aactgtctgg acccgtttgt ttattacttt gcgtcccggg aattccagct gcgcctgcgg gaatatttgg gctgccgccg ggtgcccaga gacaccctgg acacgcgccg cgagagcctc ttctccgcca ggaccacgtc cgtgcgctcc gaggccggtg cgcaccctga agggatggag ggagccacca ggcccggcct ccagaggcag gagagtgtgt tctgagtccc gggggcgcag cttggagagc cgggggcgca gcttggagga tccaggggcg catggagagg ccacggtgcc agaggttcag ggagaacagc tgcgttgctc ccaggcactg cagaggcccg gtggggaagg gtctccaggc tttattcctc ccaggcactg cagaggcacc ggtgaggaag ggtctccagg cttcactcag ggtagagaaa caagcaaagc ccagcagcgc acagggtgct tgttatcctg cagagggtgc ctctgcctct ctgtgtcagg ggacagcttg tgtcaccacg cccggctaat ttttgtattt tttttagtag agctgggctg tcacccccga gctccttaga cactcctcac acctgtccat acccgaggat ggatattcaa ccagccccac cgcctacccg actcggtttc tggatatcct ctgtgggcga actgcgagcc ccattcccag ctcttctccc tgctgacatc gtcccttagc acacctgtcc atacccgagg atggatattc aaccagcccc accgcctacc cgactcggtt tctggatatc ctctgtgggc gaactgcgag ccccattccc agctcttctc cctgctgaca tcgtccctta gttgtggttc tggccttctc cattctcctc caggggttct ggtctccgta gcccggtgca cgccgaaatt tctgtttatt tcactcaggg gcactgtggt tgctgtggtt ggaattcttc tttcagagga gcgcctgggg ctcctgcaag tcagctactc tccgtgccca cttcccctca cacacacacc cccctcgtgc cgaattc		
530	160435	LS160435 Receptor	LR80	MQVPNSTGPD NATLQMLRNP AIAVALPVVY SLVAAVSIPG NLFSLWVLCR RMGPRSPSVI FMINLSVTDL MLASVLPFQI YYHCNRHHWV FGVLLCNVVT VAFYANMYSS ILTMTCISVE RFLGVLYPLS SKRWRRRRYA VAACAGTWLL LLTALSPLAR TDLTYPVHAL GIITCFDVLK WTMLPSVAMW AVFLFTIFIL LFLIPFVITV ACYTATILKL LRTEEAHGRE QRRRAVGLAA VVLLAFVTCF APNNFVLLAH IVSRLFYGKS YYHVYKLTLC LSCLNNCLDP FVYYFASREF QLRLREYLGC RRVPRDTLDT RRESLFSART TSVRSEAGAH PEGMEGATRP GLQRQESVF	P	Homo sapiens
531	160889	Platelet Activating Receptor Homolog (H963)	NM_013308	gaattcggcc aaagaggcct atgcttctct gaagacttgc agcaaggctt gctgaggctc acagaagata gccccagtgt tttggagtgg ttttgaatgt gattctgaga tcagactgac tgagctggaa tcctggcttt atatcttacc agctacacaa ccttggagtc ttagaaattt tttcttttca ataagcagtc atccttactt tccctcaaga tgacaaacag ttcgttcttc tgcccagttt ataaagatct ggagccattc acgtattttt tttatttagt tttccttgtt ggaattattg gaagttgttt tgcaacctgg gcttttatac agaagaatac gaatcacagg tgtgtgagca tctacttaat taatttgctt acagccgatt tcctgcttac tctggcatta ccagtgaaaa ttgttgttga cttgggtgtg gcaccttgga agctgaagat attccactgc caagtaacag cctgcctcat ctatatcaat atgtatttat caattatctt cttagcattt gtcagcattg accgctgtct tcagctgaca cacagctgca agatctaccg aatacaagaa cccggatttg ccaaaatgat atcaaccgtt gtgtggctaa tggtccttct tataatggtg ccaaatatga tgattcccat caaagacatc aaggaaaagt caaatgtggg ttgtatggag tttaaaaagg aatttggaag aaattggcat ttgctgacaa atttcatatg tgtagcaata tttttaaatt tctcagccat catttaaata tccaattgcc ttgtaattcg acagctctac agaaacaaag ataatgaaaa ttacccaaat gtgaaaaagg ctctcatcaa catactttta gtgaccacgg gctacatcat atgctttgtt ccttaccaca ttgtccgaat cccgtatacc ctcagccaga cagaagtcat aactgattgc tcaaccagga tttcactctt caaagccaaa gaggctacac tgctcctggc tgtgtcgaac ctgtgctttg atcctatcct gtactatcac ctctcaaaag cattccgctc aaaggtcact gagacttttg cctcacctaa agagaccaag gctcagaaag aaaaattaag atgtgaaaat aatgcataaa agacaggatt ttttgtgcta ccaattctgg ccttactgga ccataaagtt aattatagct ttgaaagata aaaaaaaaaa aaaagcggcc gc	A	Homo sapiens
532	160889	Platelet Activating Receptor	NP_037440.1	MTNSSFFCPV YKDLEPFTYF FYLVFLVGII GSCFATWAFI QKNTNHRCVS IYLINLLTAD FLLTLALPVK IVVDLGVAPW KLKIFHCQVT ACLIYINMYL SIIFLAFVSI DRCLQLTHSC KIYRIQEPGF AKMISTVVWL MVLLIMVPNM MIPIKDIKEK	P	Homo sapiens

		Homolog (H963)		SNVGCMEFKK EFGRNWHLLT NFICVAIFLN FSAILISNC LVIRQLYRNK DNENYPNVKK ALINILLVTT GYIICFVPYH IVRIPYTLSQ TEVITDCSTR ISLFKAKEAT LLLAVSNLCF DPILYYHLSK AFRSKVTETF ASPKETKAQK EKLRCENNA		
533	161024	Protein A	NM_019858	gagggaggag ggcgggcgag ctggagccgg caggcagcgg gagcccgaga gagccgcgtc gggagtgcgg tctccatggc agtgctgggc gcagccggag agagcctgtc cagggggctg agccccaccc ccaaatccct ggggcatcca gaagattcct gactggtcaa gaaccagagg caaaagagac ctggaagtcc cagcatgggg accagaaccc cccagccagc ctcatagttg ggaaagtagc cagcttgcct gccccatcaa ttgcagggat gcttaaggaa ggccccgccc agtatgaaag ctgaggattg cctctgctga ccctcagtct cctcccctgc cctctacatc tgccctcagc tgggtccatc atgcaatgct gagcactggg gtgagcctgg gggcagcctg cctgctgaca gggcgaggat tgtggggatc atgggagtgt ttgtgagtgg ggctcctggg tgagacctag cccccacccc cacagagctc aagggggtgg ggggctgagg ataggatggc tcggggcggg gcgggggcag aggaggcctc cctgcgctcc aacgcattgt cctggctggc ctgtgggctc ctggcgctgc tggccaatgc ctggatcatc ctcagcatct cggccaagca gcagaagcac aagccactgg agctgctgct ctgcttccta gcgggcacac acatactcat ggcagctgtg cccctcacca cctttgccgt ggtgcagctg cgtcgtcagg cttcctccga ctatgactgg aacgagagta tctgcaaggt cttcgtgtcc acctactaca ccctggcgct ggccacctgc ttcacggtcg cctccctctc ctaccatcgc atgtggatgg tgcgctggcc cgtcaactac cgcctcagca acgccaagaa gcaggcactg catgccgtca tggcatctg gatggtcagc ttcatcctct ccacactgcc ctccattggc tggcacaaca acggcgagcg ctactatgcc cgcggctgcc agttcatagt ctccaagatc ggcctcggct ttggcgtttg cttcagcctc ttgctacttg ggggaattgt catgggtctg gtctgtgtgg ccatcacctt ctaccagaca ctgtgggccc ggccccggag ggctcggcag gcccggagag tggggggtgg tggggggacc aaagcgggtg ggccaggggc cttgggtacc cggccagctt ttgaggtacc agccattgtg gtggaggatg cccgagggaa gcggcggtcc tcgctggatg gctcggagtc tgccaagaca tccctgcagg tcaccaactt ggtcagcgcc atcgtctttc tctatgactc actcacaggg gtgcccatct tggtggtgag cttcttctcc ctcaagtcgg actcggcgcc cccctggatg gtgctggctg tgctgtggtg ctccatggca cagacgctgc tgctgccctc cttcatctgg tcctgcgagc gctaccgcgc cgacgtgcgc acagtgtggg agcaatgcgt ggccatcatg tctgaggagg atggagatga cgatgggggc tgtgacgact atgcagaggg ccgagtttgc aaagttcgct ttgatgctaa cggagccaca ggaccaggga gccgggaccc cgcccaggtg aagctgctgc ctggaaggca catgctcttc cctcctcttg agagagtcca ctacttacag gtccccctat cccggcgtct gtcccatgat gagacaaaca tcttctctac ccctcgggaa ccaggctcct tcctgcacaa gtggtcatcc tctgatgaca tccgggtcct cccagcccag agccgggccc tcgggggtcc tcctgagtac ctgggacaaa gacacaggtt ggaggacgag gaggacgagg aagaggctga aggtggggggg ctggccagcc ttcgccaatt cttggagagt ggggttctgg ggtcaggtgg gggacccccca cggggtcctg gcttcttccg ggaggagatc accaccttca tcgatgagac acctctgcct tctccgactg cctcaccagg gcactctcct cgtcggcccc ggccactggg cctctcaccc cgccgactct cccttgggtc ccctgagagc agagccgttg gacttccttt gggactaagc gcagggagac gctgctccct gacggggggt gaagaaagtg caagggcttg gggaggatcc tggggcccag gcaaccccat ctttccccag ctgaccctgt gagcccaagc aggcctgctg aactcagagg agaaagcctg agtgagtaac acctcattct ggccgagagt agggcagctg cctccagact ctggggagac gggcgctaga tttggggctc agaaggccct gctctctccc atccaagtga ccagatgccc tactcagctt ccatcacccc tagcaatatg tattaaagtc tgaagtgttg ccatgg	A	Homo sapiens
534	161024	Protein A	NP_062832.1	MARGGAGAEE ASLRSNALSW LACGLLALLA NAWIILSISA KQQKHKPLEL LLCFLAGTHI LMAAVPLTTF AVVQLRRQAS SDYDWNESIC KVFVSTYYTL ALATCFTVAS LSYHRMWMVR WPVNYRLSNA KKQALHAVMG IWMVSFILST LPSIGWHNNG ERYYARGCQF IVSKIGLGFG VCFSLLLLGG IVMGLVCVAI TFYQTLWARP RRARQARRVG GGGGTKAGGP GALGTRPAFE VPAIVVEDAR	P	Homo sapiens

				GKRRSSLDGS ESAKTSLQVT NLVSAIVFLY DSLTGVPILV VSFFSLKSDS APPWMVLAVL WCSMAQTLLL PSFIWSCERY RADVRTVWEQ CVAIMSEEDG DDDGGCDDYA EGRVCKVRFD ANGATGPGSR DPAQVKLLPG RHMLFPPLER VHYLQVPLSR RLSHDETNIF STPREPGSFL HKWSSSDDIR VLPAQSRALG GPPEYLGQRH RLEDEEDEEE AEGGGLASLR QFLESGVLGS GGGPPRGPGF FREEITTFID ETPLPSPTAS PGHSPRRPRP LGLSPRRLSL GSPESRAVGL PLGLSAGRRC SLTGGEESAR AWGGSWGPGN PIFPQLTL		
535	161214	Galanin Receptor GalR3	NM_003614	tcccaggtgc ccgtctgatg gggagatggc tgatgcccag aacatttcac tggacagccc agggagtgtg ggggccgtgg cagtgcctgt ggtctttgcc ctaatcttcc tgctgggcac agtgggcaat gggctggtgc tggcagtgct cctgcagcct ggcccgagtg cctggcagga gcctggcagc accacggacc tgttcatcct caacctggcg gtggctgacc tctgcttcat cctgtgctgc gtgcccttcc aggccaccat ctacacgctg gatgcctggc tctttggggc cctcgtctgc aaggccgtgc acctgctcat ctacctcacc atgtacgcca gcagctttac gctggctgct gtctccgtgg acaggtacct ggccgtgcgg cacccgctgc gctcgcgcgc cctgcgcacg ccgcgtaacg cccgcgccgc agtggggctg gtgtggctgc tggcggcgct cttctcggcg ccctacctca gctactacgg caccgtgcgc tacggcgcgc tggagctctg cgtgcccgcc tgggaggacg cgcgccgccg cgccctggac gtggccacct tcgctgccgg ctacctgctg cccgtggctg tggtgagcct ggcctacggg cgcacgctgc gcttcctgtg ggccgccgtg ggtcccgcgg gcgcggcggc ggccgaggcg cggcggaggg cgacgggccg cgcggggcgc gccatgctgg cggtggccgc gctctacgcg ctctgctggg gtccgcacca cgcgctcatc ctgtgcttct ggtacggccg cttcgccttc agcccggcca cctacgcctg ccgcctggcc tcacactgcc tggcctacgc caactcctgc ctcaaccccg tcgtctacgc gctcgcctcg cgccacttcc gcgcgcgctt ccgccgcctg tggccgtgcg gccgccgacg ccgccaccgt gcccgccgcg ccttgcgtcg cgtccgcccc gcgtcctcgg gcccacccgg ctgccccgga gacgcccggc ctagcgggag gctgctggct ggtggcggcc agggcccgga gcccagggag ggacccgtcc acggcggaga ggctgcccga ggaccggaat aaaccctgcc gcctggactc cgcctgt	A	Homo sapiens
536	161214	Galanin Receptor GalR3	NP_003605.1	MADAQNISLD SPGSVGAVAV PVVFALIFLL GTVGNGLVLA VLLQPGPSAW QEPGSTTDLF ILNLAVADLC FILCCVPFQA TIYTLDAWLF GALVCKAVHL LIYLTMYASS FTLAAVSVDR YLAVRHPLRS RALRTPRNAR AAVGLVWLLA ALFSAPYLSY YGTVRYGALE LCVPAWEDAR RRALDVATFA AGYLLPVAVV SLAYGRTLRF LWAAVGPAGA AAAEARRRAT GRAGRAMLAV AALYALCWGP HHALILCFWY GRFAFSPATY ACRLASHCLA YANSCLNPLV YALASRHFRA RFRRLWPCGR RRRHRARRAL RRVRPASSGP PGCPGDARPS GRLLAGGGQG PEPREGPVHG GEAARGPE	P	Homo sapiens
537	161221	Urotensin-II Receptor (GPR14)	NM_018949	atggcgctga cccccgagtc cccgagcagc ttcctgggc tggccgccac cggcagctct gtgccggagc cgcctggcgg ccccaacgca accctcaaca gctcctgggc cagcccgacc gagcccagct ccctggagga cctggtggcc acgggcacca ttgggactct gctgtcggcc atgggcgtgg tgggcgtggt gggcaacgcc tacacgctgg tggtcacctg ccgctccctg cgtgcggtgg cctccatgta cgtctacgtg gtcaacctgg cgctggccga cctgctgtac ctgctcagca tcccсttcat cgtggccacc tacgtcacca aggagtggca cttcggggac gtgggctgcc gcgtgctctt cggcctggac ttcctgacca tgcacgccag catcttcacg ctgaccgtca tgagcagcga gcgctacgct gcggtgctgc ggccgctgga caccgtgcag cgccccaagg gctaccgcaa gctgctggcg ctgggcacct ggctgctggc gctgctgctg acgctgcccg tgatgctggc catgcggctg gtgcgccggg gtcccaagag cctgtgcctg cccgcctggg gcccgcgcgc ccaccgcgcc tacctgacgc tgctcttcgc caccagcatc gcggggcccg ggctgctcat cggctgctc tacgcgcgcc tggcccgcgc ctaccgccgc tcgcagcgcg cctccttcaa gcgggcccgg cggccggggg cgcgcgcgct gcgcctggtg ctgggcatcg tgctgctctt	A	Homo sapiens

				ctgggcctgc ttcctgccct tctggctgtg gcagctgctc gcccagtacc accaggcccc gctggcgccg cggacggcgc gcatcgtcaa ctacctgacc acctgcctca cctacggcaa cagctgcgcc aacccettcc tctacacgct gctcaccagg aactaccgcg accacctgcg cggccgcgtg cggggcccgg gcagcggggg aggccggggg cccgttccct ccctgcagcc ccgcgcccgc ttccagcgct gttcgggccg ctccctgtct tcctgcagcc cacagcccac tgacagcctc gtgctggccc cagcggcccc ggcccgacct gcgcccgagg gtcccagggc cccggcgtga		
538	161221	Urotensin-II Receptor (GPR14)	NP_061822.1	MALTPESPSS FPGLAATGSS VPEPPGGPNA TLNSSWASPT EPSSLEDLVA TGTIGTLLSA MGVVGVVGNA YTLVVTCRSL RAVASMYVYV VNLALADLLY LLSIPFIVAT YVTKEWHFGD VGCRVLFGLD FLTMHASIFT LTVMSSERYA AVLRPLDTVQ RPKGYRKLLA LGTWLLALLL TLPVMLAMRL VRRGPKSLCL PAWGPRAHRA YLTLLFATSI AGPGLLIGLL YARLARAYRR SQRASFKRAR RPGARALRLV LGIVLLFWAC FLPFWLWQLL AQYHQAPLAP RTARIVNYLT TCLTYGNSCA NPFLYTLLTR NYRDHLRGRV RGPGSGGGRG PVPSLQPRAR FQRCSGRSLS SCSPQPTDSL VLAPAAPARP APEGPRAPA	P	Homo sapiens
539	161249	G Protein-Coupled Receptor GPR66	NM_006056	atggcttgca atggcagtgc ggccaggggg cactttgacc ctgaggactt gaacctgact gacgaggcac tgagactcaa gtacctgggg ccccagcaga cagagctgtt catgcccatc tgtgccacat acctgctgat cttcgtggtg ggcgctgtgg gcaatgggct gacctgtctg gtcatcctgc gccacaaggc catgcgcacg cctaccaact actacctctt cagcctggcc gtgtcggacc tgctggtgct gctggtgggc ctgcccctgg agctctatga gatgtggcac aactacccct tcctgctggg cgttggtggc tgctatttcc gcacgctact gtttgagatg gtctgcctgg cctcagtgct caacgtcact gccctgagcg tggaacgcta tgtggccgtg gtgcacccac tccaggccag gtccatggtg acgcgggccc atgtgcgccg agtgcttggg gccgtctggg gtcttgccat gctctgctcc ctgcccaaca ccagcctgca cggcatccgg cagctgcacg tgccctgccg gggcccagtg ccagactcag ctgtttgcat gctggtccgc ccacgggccc tctacaacat ggtagtgcag accaccgcgc tgctcttctt ctgcctgccc atggccatca tgagcgtgct ctacctgctc attgggctgc gactgcggcg ggagaggctg ctgctcatgc aggaggccaa gggcaggggc tctgcagcag ccaggtccag atacacctgc aggctccagc agcacgatcg gggccggaga caagtgacca agatgctgtt tgtcctggtc gtggtgtttg gcatctgctg gccccgttc cacgccgacc gcgtcatgtg gagcgtcgtg tcacagtgga cagatggcct gcacctggcc ttccagcacg tgcacgtcat ctccggcatc ttcttctacc tgggctcggc ggccaacccc gtgctctata gcctcatgtc cagccgcttc cgagagacct tccaggaggc cctgtgcctc ggggcctgct gccatcgcct cagaccccgc cacagctccc acagcctcag caggatgacc acaggcagca ccctgtgtga tgtgggctcc ctgggcagct gggtccaccc cctggctggg aacgatggcc cagaggcgca gcaagagacc gatccatcct ga	A	Homo sapiens
540	161249	G Protein-Coupled Receptor GPR66	NP_006047.1	MACNGSAARG HFDPEDLNLT DEALRLKYLG PQQTELFMPI CATYLLIFVV GAVGNGLTCL VILRHKAMRT PTNYYLFSLA VSDLLVLLVG LPLELYEMWH NYPFLLGVGG CYFRTLLFEM VCLASVLNVT ALSVERYVAV VHPLQARSMV TRAHVRRVLG AVWGLAMLCS LPNTSLHGIR QLHVPCRGPV PDSAVCMLVR PRALYNMVVQ TTALLFFCLP MAIMSVLYLL IGLRLRRERL LLMQEAKGRG SAAARSRYTC RLQQHDRGRR QVTKMLFVLV VVFGICWAPF HADRVMWSVV SQWTDGLHLA FQHVHVISGI FFYLGSAANP VLYSLMSSRF RETFQEALCL GACCHRLRPR HSSHSLSRMT TGSTLCDVGS LGSWVHPLAG NDGPEAQQET DPS	P	Homo sapiens
541	161251	Purinergic Receptor P2Y10	NM_014499	atggctaacc ttgacaaata cactgaaaca ttcaagatgg gtagcaacag taccagcact gctgagattt actgtaatgt cactaatgtg aaatttcaat actccctcta tgcaaccacc tatatcctca tattcattcc tggtcttctg gctaacagtg cagccttgtg ggttctgtgc cgcttcatca gcaagaaaaa taaagccatc attttcatga tcaacctctc tgtggctgac cttgctcatg tattatcttt	A	Homo sapiens

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542	161251	Purinergic Receptor P2Y10	NP_055314.1	MANLDKYTET FKMGSNSTST AEIYCNVTNV KFQYSLYATT YILIFIPGLL ANSAALWVLC RFISKKNKAI IFMINLSVAD LAHVLSLPLR IYYYISHHWP FQRALCLLCF YLKYLNMYAS ICFLTCISLQ RCFFLLKPFR ARDWKRRYDV GISAAIWIVV GTACLPFPIL RSTDLNNNKS CFADLGYKQM NAVALVGMIT VAELAGFVIP VIIIAWCTWK TTISLRQPPM AFQGISERQK ALRMVFMCAA VFFICFTPYH INFIFYTMVK ETIISSCPVV RIALYFHPFC LCLASLCCLL DPILYYFMAS EFRDQLSRHG SSVTRSRLMS KESGSSMIG	P	Homo sapiens
543	161293	G Protein-Coupled Receptor Ls161293 [Herpes virus]	NP_042597.1	MATTSATSTV NTSSLATTMT TNFTSLLTSV VTTIASLVPS TNSSEDYYDD LDDVDYEESA PCYKSDTTRL AAQVVPALYL LVFLFGLLGN ILVVIIVIRY MKIKNLTNML LLNLAISDLL FLLTLPFWMH YIGMYHDWTF GISLCKLLRG VCYMSLYSQV FCIILLTVDR YLAVVYAVTA LRFRTVTCGI VTCVCTWFLA GLLSLPEFFF HGHQDDNGRV QCDPYYPEMS TNVWRRAHVA KVIMLSLILP LLIMAVCYYV IIRRLLRRPS KKKYKAIRLI FVIMVAYFVF WTPYNIVLLL STFHATLLNL QCALSSNLDM ALLITKTVAY THCCINPVIY AFVGEKFRRH LYHFFHTYVA IYLCKYIPFL SGDGEGKEGP TRI	P	Equine herpesvirus 2
544	177147	Neuromedin K Receptor-Like (NK-4R)	NM_006679	gcgagaaccc cgactgaccg cggccacggc ggctccccga cctgccgcgt cctgcgggcg gcgctgggct ccgggcactc gggctgcgcc cccatggcct cgcccgcggg gaacctgagc gcgtggccgg gctgggggtg gccgccgccg gccgcgctga ggaacctgac ctcctccccg gccccgaccg cgtccccgtc cccggccccg tcgtggacgc cctcgccgcg ccccggcccc gcgcacccgt tcctgcagcc gccctgggcc gtggcgctct ggtcgctggc ctacggcgcc gtggtggccg tggcggtgct cggcaacctc gtggtgatct ggatcgtgct ggcccacaag cgcatgcgga cggtcaccaa ctccttcctc gtgaacctgg ccttcgccga cgccgccatg gccgcgctca acgcgctggt caacttcatc tacgcgctgc acggagagtg gtacttcggc gccaactact gccgcttcca gaacttcttc cccatcaccg ccgtgttcgc cagcatctac tccatgacgg ccatcgcggt ggacagatac atggccatta ttgacccct gaagcccagg ctgtctgcca cggccacccg gatcgtcatt ggaagcatct ggattctggc atttctactt gcatttcctc agtgtctgta ttccaaaatc aaagtcatgc caggccgtac tctttgctac gtgcagtggc cagaaggttc aaggcaacat ttcacgtacc acatgatcgt catcgtcctg gtgtactgct ttcctttgct catcatgggc atcacctaca ccatagttgg aatcacgctc tggggagggg agatcccagg agacacctgc gacaagtacc aggagcagct gaaggccaag cggaaggttg taaaaatgat gatcatcgtt gtggtgacct ttgccatctg ctggctgccc tatcacatct acttcatcct caccgccatc tatcagcagc tgaacaggtg gaaatacatc cagcaggtct acctggccag cttctggctg gccatgagct cgaccatgta caaccccatc atctactgct gtctgaataa gagatttcgt gctggcttca agagggcctt ccgctggtgc cctttcatcc acgtctccag ctacgacgag ctggagctca aagccaccag gctccaccca atgcgacaga gcagcctata cacagtgaca agaatggagt ccatgagcgt ggtattcgac tccaacgatg ggacagtgc caggtccagt caccagaaga gagggacgac cagagacgta	A	Homo sapiens

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				ttaaatatat taaaaatcat atgaaaaat		
545	177147	Neuromedin K Receptor-Like (NK-4R)	NP_006670.1	MASPAGNLSA WPGWGWPPPA ALRNLTSSPA PTASPSPAPS WTPSPRPGPA HPFLQPPWAV ALWSLAYGAV VAVAVLGNLV VIWIVLAHKR MRTVTNSFLV NLAFADAAMA ALNALVNFIY ALHGEWYFGA NYCRFQNFFP ITAVFASIYS MTAIAVDRYM AIIDPLKPRL SATATRIVIG SIWILAFLLA FPQCLYSKIK VMPGRTLCYV QWPEGSRQHF TYHMIVIVLV YCFPLLIMGI TYTIVGITLW GGEIPGDTCD KYQEQLKAKR KVVKMMIIVV VTFAICWLPY HIYFILTAIY QQLNRWKYIQ QVYLASFWLA MSSTMYNPII YCCLNKRFRA GFKRAFRWCP FIHVSSYDEL ELKATRLHPM RQSSLYTVTR MESMSVVFDS NDGDSARSSH QKRGTTRDVG SNVCSRRNSK STSTTASFVS SSHMSVEEGS	P	Homo sapiens
546	177168	Cysteinyl Leukotriene CYSLT1 Receptor	NM_006639	atggatgaaa caggaaatct gacagtatct tctgccacat gccatgacac tattgatgac ttccgcaatc aagtgtattc caccttgtac tctatgatct ctgttgtagg cttctttggc aatggctttg tgctctatgt cctcataaaa acctatcaca agaagtcagc cttccaagta tacatgatta atttagcagt agcagatcta ctttgtgtgt gcacactgcc tctccgtgtg gtctattatg ttcacaaagg catttggctc tttggtgact tcttgtgccg cctcagcacc tatgctttgt atgtcaacct ctattgtagc atcttcttta tgacagccat gagcttttc cggtgcattg caattgtttt tccagtccag aacattaatt tggttacaca gaaaaaagcc aggtttgtgt gtgtaggtat ttggattttt gtgattttga ccagttctcc atttctaatg gccaaaccac aaaaagatga gaaaaataat accaagtgct ttgagccccc acaagacaat caaactaaaa atcatgtttt ggtcttgcat tatgtgtcat tgtttgttgg ctttatcatc ccttttgtta ttataattgt ctgttacaca atgatcattt tgaccttact aaaaaaatca atgaaaaaaa atctgtcaag tcataaaaag gctataggaa tgatcatggt cgtgaccgct gccttttag tcagtttcat gccatatcat attcaacgta ccattcacct tcattttta cacaatgaaa ctaaaccctg tgattctgtc cttagaatgc agaagtccgt ggtcataacc ttgtctctgg ctgcatccaa ttgttgcttt gaccctctcc tatatttctt ttctgggggt aactttagga aaaggctgtc tacattcaga aagcattctt tgtccagcgt gacttatgta cccagaaaga aggcctcttt gccagaaaaa ggagaagaaa tatgtaaagt atag	A	Homo sapiens
547	177168	Cysteinyl Leukotriene CYSLT1 Receptor	NP_006630.1	MDETGNLTVS SATCHDTIDD FRNQVYSTLY SMISVVGFFG NGFVLYVLIK TYHKKSAFQV YMINLAVADL LCVCTLPLRV VYYVHKGIWL FGDFLCRLST YALYVNLYCS IFFMTAMSFF RCIAIVFPVQ NINLVTQKKA RFVCVGIWIF VILTSSPFLM AKPQKDEKNN TKCFEPPQDN QTKNHVLVLH YVSLFVGFII PFVIIIVCYT MIILTLLKKS MKKNLSSHKK AIGMIMVVTA AFLVSFMPYH IQRTIHLHFL HNETKPCDSV LRMQKSVVIT LSLAASNCCF DPLLYFFSGG NFRKRLSTFR KHSLSSVTYV PRKKASLPEK GEEICKV	P	Homo sapiens
548	177191	Histamine H3 Receptor	NM_007232	ccacgcgtcc gccggctgca cggtcgcacc ggcagcggct caggctccgg ctcctctccc gctgcagcag ccgcgctgcc ggccccactg ggctcggatc cggccccggc cccctcggca ccgcctgctc tggccccggc cccggccccg cggaccatgc gctgggcgcc cccaggggaa acccgacccg gccaagggcc cgcaaagacg aggctcccgg gccggggccc ctcccggccg cccagctctc ggccggcgcc ctgccccgcg tcccggagcc gcgtgagcct gcggggccat ggagcgcgcg ccgcccgacg ggccgctgaa cgcttcgggg gcgctggcgg gcgatgcggc ggcggcgggc ggggcgcgcg gcttctcggc agcctggacc gcggtgctgg ccgcgctcat ggcgctgctc atcgtggcca cggtgctggg caacgcgctg gtcatgctcg ccttcgtggc cgactcgagc ctccgcaccc agaacaactt cttcctgctc aacctcgcca tctccgactt cctcgtcggc gccttctgca tcccactgta tgtaccctac gtgctgacag gccgctggac cttcggccgg ggcctctgca agctgtggct ggtagtggac tacctgctgt gcacctcctc tgccttcaac atcgtgctca tcagctacga ccgcttcctg tcggtcaccc gagcggtctc ataccgggcc cagcagggtg acacgcggcg ggcagtgcgg aagatgctgc tggtgtgggt gctggccttc ctgctgtacg gaccagccat cctgagctgg gagtacctgt ccgggggcag ctccatcccc gagggccact gctatgccga gttcttctac	A	Homo sapiens

				aactggtact tcctcatcac ggcttccacc ctggagttct ttacgccctt cctcagcgtc accttcttta acctcagcat ctacctgaac atccagaggc gcacccgcct ccggctggat ggggctcgag aggcagccgg ccccgagccc cctcccgagg cccagccctc accaccccca ccgcctggct gctggggctg ctggcagaag gggcacgggg aggccatgcc gctgcacagg tatgggggtgg gtgaggcggc cgtaggcgct gaggccgggg aggcgaccct cgggggtggc ggtgggggcg gctccgtggc ttcacccacc tccagctccg gcagctcctc gaggggcact gagaggccgc gctcactcaa gaggggctcc aagccgtcgg cgtcctcggc ctcgctggag aagcgcatga agatggtgtc ccagagcttc acccagcgct ttcggctgtc tcgggacagg aaagtggcca agtcgctggc cgtcatcgtg agcatctttg ggctctgctg ggccccatac acgctgctga tgatcatccg ggccgcctgc catggccact gcgtccctga ctactggtac gaaacctcct tctggctcct gtgggccaac tcggctgtca accctgtcct ctaccctctg tgccaccaca gcttccgccg ggccttcacc aagctgctct gcccccagaa gctcaaaatc cagcccccaca gctccctgga gcactgctgg aagtgagtgg cccaccagag cctccctcag ccacgcctct ctcagcccag gtctcctggg catctggccc tgctgccccc tacccggctc gttcccccag gggtgagccc cgccgtgtct gtggccctct cttaatgcca cggcagccac cctgccatgg aggcgccttc ctgggttggc cagagggccc ctcactggct ggactggagg ctgggtggcc ggccctgccc cccacattct ggctccaccg gggagggaca gtctggaggt cccagacatg ctgcccaccc cctgctggtg cccacccttc gcagttactg gttggtgttc ttcccaaagc aagcacctgg gtgtgctcca ggcttcctgc cctagcagtt tgcctctgca cgtgcacaca cctgcacacc cctgcacaca cctgcacacc gtccctctcc ccggacaagc ccaggacact gcctttgctg ccttctgtct cttgcataag cctcaggcct ggccctttca cccctcttcc caccaactct ctctgccccc aaaagtgtca aggggcccta ggaacctcga agctgttctc tgcttttcca ttctgggtgt tttcagaaag atgaagaaga aaacatgtct gtgaacttga tgttcgtggg atgtttaatc aagagagaca aaattgctga ggagctcagg gctggattgg caggtgtggg ctcccacgcc ctcctccctc cgctaaggct tccggctgag ctgtgccagc tgcttctgcc caccccgcct ctgggctcac accagccctg gtggccaagc ctgccccggc cactctgttt gctcacccag gacctctggg ggttgttggg aggagggggc ccggctgggc ccgagggtcc caaggcgtgc aggggcggtc cagaggaggt gcccgggcag gggccgcttc gccatgtgct gtgcacccgt gccacgcgct ctgcatgctc ctctgcctgt gcccgctgcg ctgccctgca aaccgtgagg tcacaataaa gtgtattttt ttaaaaaaaa aaaaaaaaaa aaaaaaaaa		
549	177191	Histamine H3 Receptor	NP_009163.1	MERAPPDGPL NASGALAGDA AAAGGARGFS AAWTAVLAAL MALLIVATVL GNALVMLAFV ADSSLRTQNN FFLLNLAISD FLVGAFCIPL YVPYVLTGRW TFGRGLCKLW LVVDYLLCTS SAFNIVLISY DRFLSVTRAV SYRAQQGDTR RAVRKMLLVW VLAFLLYGPA ILSWEYLSGG SSIPEGHCYA EFFYNWYFLI TASTLEFFTP FLSVTFFNLS IYLNIQRRTR LRLDGAREAA GPEPPPEAQP SPPPPPGCWG CWQKGHGEAM PLHRYGVGEA AVGAEAGEAT LGGGGGGGSV ASPTSSSGSS SRGTERPRSL KRGSKPSASS ASLEKRMKMV SQSFTQRFRL SRDRKVAKSL AVIVSIFGLC WAPYTLLMII RAACHGHCVP DYWYETSFWL LWANSAVNPV LYPLCHHSFR RAFTKLLCPQ KLKIQPHSSL EHCWK	P	Homo sapiens
550	177387	G Protein-Coupled Receptor ORF4	NM_020155	agcggccgct gccctgaccc gacgggtatc agccggctct ccccctccac cccaggacga catgaacgac cgaggccagg gagtcctctc cttgggcctc tgcatccccc catccttggc tctggggtag gcccagggag gagacacccc caacccctat ccggtctgtc ctggagaaaa gagactgccc ttccatgccc ctgagtgagg ggcctggggc caggctgcct gtgttcccca agggcaaggg tctctctgtt gaggaggggg gcctgtcagc cacaacttct ttcctcctga gcgcccccatc tccctctctg caccctgcaa ttcccacccc tccgtattta tttcctggt cccgccgaca gtccctcctt gtctgtctcc gggattcagg cctccctccc tgacatggag agtaacctgt ctggcctggt gcctgctgcc gggctggtgc ctgcgctgcc acctgctgtg accctggggc tgacagctgc ctacaccacc ctgtatgccc tgctcttctt ctccgtctat gcccagctct ggctggtgct tctgtatggg cacaagcgtc tcagctatca gacggtgttc ctggccctct gtctgctctg ggccgccttg cgtaccaccc tcttctcctt ctacttccga gatactcccc	A	Homo sapiens

				gcgccaaccg cctggggccc ttgcccttct ggcttctcta ctgctgcccc gtctgcctgc agttcttcac cttgacgctt atgaacctct actttgccca ggtggtgttc aaggccaagg tgaagcgtcg gccggagatg agccgaggct tgctcgctgt ccgaggggcc tttgtggggg cctcgctgct ctttctgctg gtgaacgtgc tgtgtgctgt gctctcccat cggcgcgcac agccctgggc cctgctgctt gtccgcgtcc tggtgagcga ctccctgttc gtcatctgcg cgctgtctct tgctgcctgc ctctgcctcg tcgccagcgg gcgccctcca ctagcatcta cctggaggcc aaggtagggc tgcagcactg atgcccaggt gtcttttggg tctctcggca gcggttctca gggtgtagag		
551	177387	G Protein-Coupled Receptor ORF4	NP_064540.1	MESNLSGLVP AAGLVPALPP AVTLGLTAAY TTLYALLFFS VYAQLWLVLL YGHKRLSYQT VFLALCLLWA ALRTTLFSFY FRDTPRANRL GPLPFWLLYC CPVCLQFFTL TLMNLYFAQV VFKAKVKRRP EMSRGLLAVR GAFVGASLLF LLVNVLCAVL SHRRAQPWAL LLVRVLVSDS LFVICALSLA ACLCLVASGR PPLASTWRPR	P	Homo sapiens
552	180956	Lysophosphatidic Acid Receptor Edg7	NM_012152	cttctttaaa tttctttcta ggatgttcac ttcttctcca caatgaatga gtgtcactat gacaagcaca tggacttttt ttataatagg agcaacactg atactgtcga tgactggaca ggaacaaagc ttgtgattgt tttgtgtgtt gggacgtttt tctgcctgtt tatttttttt tctaattctc tggtcatcgc ggcagtgatc aaaaacagaa aatttcattt ccccttctac tacctgttgg ctaatttagc tgctgccgat ttcttcgctg gaattgccta tgtattcctg atgtttaaca caggcccagt ttcaaaaact ttgactgtca accgctggtt tctccgtcag gggcttctgg acagtagctt gactgcttcc ctcaccaact tgctggttat cgccgtggag aggcacatgt caatcatgag gatgcgggtc catagcaacc tgaccaaaaa gaggtgaca ctgctcattt tgcttgtctg ggccatcgcc atttttatgg gggcggtccc cacactgggc tggaattgcc tctgcaacat ctctgcctgc tcttccctgg cccccattta cagcaggagt taccttgttt tctggacagt gtccaacctc atggccttcc tcatcatggt tgtggtgtac ctgcggatct acgtgtacgt caagaggaaa accaacgtct tgtctccgca tacaagtggg tccatcagcc gccggaggac acccatgaag ctaatgaaga cggtgatgac tgtcttaggg gcgtttgtgg tatgctggac cccgggcctg gtggttctgc tcctcgacgg cctgaactgc aggcagtgtg gcgtgcagca tgtgaaaagg tggttcctgc tgctggcgct gctcaactcc gtcgtgaacc ccatcatcta ctcctacaag gacgaggaca tgtatggcac catgaagaag atgatctgct gcttctctca ggagaaccca gagaggcgtc cctctcgcat cccctccaca gtcctcagca ggagtgacac aggcagccag tacatagagg atagtattag ccaaggtgca gtctgcaata aaagcacttc ctaaactctg gatgcctctc ggcccaccca ggtgatgact gtcttagg	A	Homo sapiens
553	180956	Lysophosphatidic Acid Receptor Edg7	NP_036284.1	MNECHYDKHM DFFYNRSNTD TVDDWTGTKL VIVLCVGTFF CLFIFFSNSL VIAAVIKNRK FHFPFYYLLA NLAAADFFAG IAYVFLMFNT GPVSKTLTVN RWFLRQGLLD SSLTASLTNL LVIAVERHMS IMRMRVHSNL TKKRVTLLIL LVWAIAIFMG AVPTLGWNCL CNISACSSLA PIYSRSYLVF WTVSNLMAFL IMVVVYLRIY VYVKRKTNVL SPHTSGSISR RRTPMKLMKT VMTVLGAFVV CWTPGLVVLL LDGLNCRQCG VQHVKRWFLL LALLNSVVNP IIYSYKDEDM YGTMKKMICC FSQENPERRP SRIPSTVLSR SDTGSQYIED SISQGAVCNK STS	P	Homo sapiens
554	189873	G Protein-Coupled Receptor GPR78	AF411107	atgggccccg gcgaggcgct gctggcgggt cttctggtga tggtactggc cgtggcgctg ctatccaacg cactggtgct gctttgttgc gcctacagcg ctgagctccg cactcgagcc tcaggcgtcc tcctggtgaa tctgtctctg ggccacctgc tgctggcggc gctggacatg cccttcacgc tgctcggtgt gatgcgcggg cggacaccgt cggcgcccgg cgcatgccaa gtcattggct tcctggacac cttcctggcg tccaacgcgg cgctgagcgt ggcggcgctg agcgcagacc agtggctggc agtgggcttc ccactgcgct acgccggacg cctgcgaccg cgctatgccg gcctgctgct gggctgtgcc tggggacagt cgctggcctt ctcaggcgct gcacttggct gctcgtggct tggctacagc agcgccttcg cgtcctgttc gctgcgcctg ccgcccgagc ctgagcgtcc gcgcttcgca gccttcaccg ccacgctcca tgccgtgggc ttcgtgctgc cgctggcggt gctctgcctc acctcgctcc aggtgcaccg ggtggcacgc agacactgcc agcgcatgga caccgtcacc atgaaggcgc	A	Homo sapiens

				tcgccgtgct cgccgacctg caccccagtg tgcggcacgg ctgcctcatc cagcagaagc ggcgccgcca ccgcgccacc aggaagattg gcattgctat tgcgaccttc ctcatctgct ttgccccgta tgtcatgacc aggctggcgg agctcgtgcc cttcgtcacc gtgaacgccc agtggggcat cctcagcaag tgcctgacct acagcaaggc ggtggccgac ccgttcacgt actctctgct ccgccggccg ttccgccaag tcctggccgg catggtgcac cggctgctga agagaacccc gcgcccagca tccacccatg acagctctct ggatgtggcc ggcatggtgc accagctgct gaagagaacc ccgcgcccag cgtccaccca caacggctct gtggacacag agaatgattc ctgcctgcag cagacacact ga		
555	189873	G Protein-Coupled Receptor GPR78	CAC34041.1	MGPGEALLAG LLVMVLAVAL LSNALVLLCC AYSAELRTRA SGVLLVNLSL GHLLLAALDM PFTLLGVMRG RTPSAPGACQ VIGFLDTFLA SNAALSVAAL SADQWLAVGF PLRYAGRLRP RYAGLLLGCA WGQSLAFSGA ALGCSWLGYS SAFASCSLRL PPEPERPRFA AFTATLHAVG FVLPLAVLCL TSLQVHRVAR RHCQRMDTVT MKALALLADL HPSVRQRCLI QQKRRRHRAT RKIGIAIATF LICFAPYVMT RLAELVPFVT VNAQWGILSK CLTYSKAVAD PFTYSLLRRP FRQVLAGMVH RLLKRTPRPA STHDSSLDVA GMVHQLLKRT PRPASTHNGS VDTENDSCLQ QTH	P	Homo sapiens
556	189874	Neuromedin U Receptor 2	NM_020167	atggaaaaac ttcagaatgc ttcctggatc taccagcaga aactagaaga tccattccag aaacacctga acagcaccga ggagtatctg gccttcctct gcggacctcg gcgcagccac ttcttcctcc ccgtgtctgt ggtgtatgtg ccaatttttg tggtgggggt cattggcaat gtcctggtgt gcctggtgat tctgcagcac caggctatga agacgcccac caactactac ctcttcagcc tggcggtctc tgacctcctg gtcctgctcc ttggaatgcc cctggaggtc tatgagatgt ggcgcaacta ccctttcttg ttcgggcccg tgggctgcta cttcaagacg gccctctttg agaccgtgtg cttcgcctcc atcctcagca tcaccaccgt cagcgtggag cgctacgtgg ccatcctaca cccgttccgc gccaaactgc agagcacccg gcgccgggcc ctcaggatcc tcggcatcgt ctggggcttc tccgtgctct tctccctgcc caacaccagc atccatggca tcaagttcca ctacttcccc aatgggtccc tggtcccagg ttcggccacc tgtacggtca tcaagcccat gtggatctac aatttcatca tccaggtcac ctccttccta ttctacctcc tccccatgac tgtcatcagt gtcctctact acctcatggc actcagacta aagaaagaca aatctcttga ggcagatgaa gggaatgcaa atattcaaag accctgcaga aaatcagtca acaagatgct gtttgtcttg gtcttagtgt ttgctatctg ttgggccccg ttccacattg accgactctt cttcagcttt gtggaggagt ggagtgaatc cctggctgct gtgttcaacc tcgtccatgt ggtgtcaggt gtcttcttct acctgagctc agctgtcaac cccattatct ataacctact gtctcgccgc ttccaggcag cattccagaa tgtgatctct tctttccaca aacagtggca ctcccagcat gacccacagt tgccacctgc ccagcggaac atcttcctga cagaatgcca ctttgtggag ctgaccgaag atataggtcc ccaattccca tgtcagtcat ccatgcacaa ctctcacctc ccaacagccc tctctagtga acagatgtca agaacaaact atcaaagctt ccactttaac aaaacctga	A	Homo sapiens
557	189874	Neuromedin U Receptor 2	NP_064552.1	MEKLQNASWI YQQKLEDPFQ KHLNSTEEYL AFLCGPRRSH FFLPVSVVYV PIFVVGVIGN VLVCLVILQH QAMKTPTNYY LFSLAVSDLL VLLLGMPLEV YEMWRNYPFL FGPVGCYFKT ALFETVCFAS ILSITTVSVE RYVAILHPFR AKLQSTRRRA LRILGIVWGF SVLFSLPNTS IHGIKFHYFP NGSLVPGSAT CTVIKPMWIY NFIIQVTSFL FYLLPMTVIS VLYYLMALRL KKDKSLEADE GNANIQRPCR KSVNKMLFVL VLVFAICWAP FHIDRLFFSF VEEWSESLAA VFNLVHVVSG VFFYLSSAVN PIIYNLLSRR FQAAFQNVIS SFHKQWHSQH DPQLPPAQRN IFLTECHFVE LTEDIGPQFP CQSSMHNSHL PTALSSEQMS RTNYQSFHFN KT	P	Homo sapiens
558	189884	G Protein-Coupled Receptor	LG94108	atgctggcag ctgcctttgc agactctaac tccagcagca tgaatgtgtc ctttgctcac ctccactttg ccggagggta cctgccctct gattcccagg actggagaac catcatcccg gctctcttgg tggctgtctg cctggtgggc ttcgtgggaa acctgtgtgt	A	Homo sapiens

		Ls189884		gattggcatc ctccttcaca atgcttggaa aggaaagcca tccatgatcc actccctgat tctgaatctc agcctggctg atctctccct cctgctgttt tctgcaccta tccgagctac ggcgtactcc aaaagtgttt gggatctagg ctggtttgtc tgcaagtcct ctgactggtt tatccacaca tgcatggcag ccaagagcct gacaatcgtt gtggtggcca aagtatgctt catgtatgca agtgacccag ccaagcaagt gagtatccac aactacacca tctggtcagt gctggtggcc atctggactg tggctagcct gttacccctg ccggaatggt tctttagcac catcaggcat catgaaggtg tggaaatgtg cctcgtggat gtaccagctg tggctgaaga gtttatgtcg atgtttggta agctctaccc actcctggca tttggccttc cattattttt tgccagcttt tatttctgga gagcttatga ccaatgtaaa aaacgaggaa ctaagactca aaatcttaga aaccagatac gctcaaagca agtcacagtg atgctgctga gcattgccat catctctgct ctcttgtggc tccccgaatg ggtagcttgg ctgtgggtat ggcatctgaa ggctgcaggc ccggccccac cacaaggttt catagccctg tctcaagtct tgatgttttc catctcttca gcaaatcctc tcatttttct tgtgatgtcg gaagagttca gggaaggctt gaaaggtgta tggaaatgga tgataaccaa aaaacctcca actgtctcag agtctcagga aacaccagct ggcaactcag agggtcttcc tgacaaggtt ccatctccag aatccccagc atccatacca gaaaaagaga aacccagctc tccctcctct ggcaaaggga aaactgagaa ggcagagatt cccatccttc ctgacgtaga gcagttttgg catgagaggg acacagtccc ttctgtacag gacaatgacc ctatcccctg ggaacatgaa gatcaagaga caggggaagg tgttaaatag		
559	189884	G Protein-Coupled Receptor Ls189884	ENSMPRT114067	MLAAAFADSN SSSMNVSFAH LHFAGGYLPS DSQDWRTIIP ALLVAVCLVG FVGNLCVIGI LLHNAWKGKP SMIHSLILNL SLADLSLLLF SAPIRATAYS KSVWDLGWFV CKSSDWFIHT CMAAKSLTIV VVAKVCFMYA SDPAKQVSIH NYTIWSVLVA IWTVASLLPL PEWFFSTIRH HEGVEMCLVD VPAVAEEFMS MFGKLYPLLA FGLPLFFASF YFWRAYDQCK KRGTKTQNLR NQIRSKQVTV MLLSIAIISA LLWLPEWVAW LWVWHLKAAG PAPPQGFIAL SQVLMFSISS ANPLIFLVMS EEFREGLKGV WKWMITKKPP TVSESQETPA GNSEGLPDKV PSPESPASIP EKEKPSSPSS GKGKTEKAEI PILPDVEQFW HERDTVPSVQ DNDPIPWEHE DQETGEGV	P	Homo sapiens
560	189895	G Protein-Coupled Receptor GPR61	NM_031936	atggagtcct cacccatccc ccagtcatca gggaactctt ccactttggg gagggtccct caaaccccag gtccctctac tgccagtggg gtcccggagg tggggctacg ggatgttgct tcggaatctg tggccctctt cttcatgctc ctgctggact tgactgctgt ggctggcaat gccgctgtga tggccgtgat cgccaagacg cctgccctcc gaaaatttgt cttcgtcttc cacctctgcc tggtggacct gctggctgcc ctgaccctca tgcccctggc catgctctcc agccctgccc tctttgacca cgccctcttt ggggaggtgg cctgccgcct ctacttgttt ctgagcgtgt gctttgtcag cctggccatc ctctcggtgt cagccatcaa tgtggagcgc tactattacg tagtccaccc catgcgctac gaggtgcgca tgacgctggg gctggtggcc tctgtgctgg tgggtgtgtg ggtgaaggcc ttggccatgg cttctgtgcc agtgttggga agggtctcct gggaggaagg agctcccagt gtccccccac actgttcact ccagtggagc cacagtgcct actgccagct tttgtggtg gtctttgctg tcctttactt tctgttgccc ctgctcctca tacttctggt ctactgcagc atgttccgag tggcccgcgt ggctgccatg ccagacgggc cgctgcccac gtggatggag acaccccggc aacgctccga atctctcagc agccgctcca cgatggtcac cagctcgggg gccccccaga ccacccccaca ccggacgttt gggggaggga aagcagcagt ggttctcctg gctgtggggg gacagttcct gctctgttgg ttgccctact tctctttcca cctctatgtt gccctgagtg ctcagcccat ttcaactggg caggtggaga gtgtggtcac ctggattggc tacttttgct tcacttccaa ccctttcttc tatggatgtc tcaaccggca gatccggggg gagctcagca agcagtttgt ctgcttcttc aagccagctc cagaggagga gctgaggctg cctagccggg agggctccat tgaggagaac ttcctgcagt tccttcaggg gactggctgt ccttctgagt cctgggtttc ccgaccccta cccagcccca agcaggagcc acctgctgtt gactttcgaa tccaggccag atag	A	Homo sapiens
561	189895	G Protein-	NP_114142.1	MESSPIPQSS GNSSTLGRVP QTPGPSTASG VPEVGLRDVA SESVALFFML	P	Homo

		Coupled Receptor GPR61		LLDLTAVAGN AAVMAVIAKT PALRKFVFVF HLCLVDLLAA LTLMPLAMLS SPALFDHALF GEVACRLYLF LSVCFVSLAI LSVSAINVER YYYVVHPMRY EVRMTLGLVA SVLVGVWVKA LAMASVPVLG RVSWEEGAPS VPPHCSLQWS HSAYCQLFVV VFAVLYFLLP LLLILLVYCS MFRVARVAAM PDGPLPTWME TPRQRSESLS SRSTMVTSSG APQTTPHRTF GGGKAAVVLL AVGGQFLLCW LPYFSFHLYV ALSAQPISTG QVESVVTWIG YFCFTSNPFF YGCLNRQIRG ELSKQFVCFF KPAPEEELRL PSREGSIEEN FLQFLQGTGC PSESWVSRPL PSPKQEPPAV DFRIQAR		sapiens
562	189900	Sphingolipid Receptor Edg8	NM_030760	atggagtcgg ggctgctgcg gccggcgccg gtgagcgagg tcatcgtcct gcattacaac tacaccggca agctccgcgg tgcgcgctac cagccgggtg ccggcctgcg cgccgacgcc gtggtgtgcc tggcggtgtg cgccttcatc gtgctagaga atctagccgt gttgttggtg ctcggacgcc acccgcgctt ccacgctccc atgttcctgc tcctgggcag cctcacgttg tcggatctgc tggcaggcgc cgcctacgcc gccaacatcc tactgtcggg gccgctcacg ctgaaactgt cccccgcgct ctggttcgca cgggagggag gcgtcttcgt ggcactcact gcgtccgtgc tgagcctcct ggccatcgcg ctggagcgca gcctcaccat ggcgcgcagg gggcccgcgc ccgtctccag tcgggggcgc acgctggcga tggcagccgc ggcctggggc gtgtcgctgc tcctcgggct cctgccagcg ctgggctgga attgcctggg tcgcctggac gcttgctcca ctgtcttgcc gctctacgcc aaggcctacg tgctcttctg cgtgctcgcc ttcgtgggca tcctggccgc gatctgtgca ctctacgcgc gcatctactg ccaggtacgc gccaacgcgc ggcgcctgcc ggcacggccc gggactgcgg ggaccacctc gacccgggcg cgtcgcaagc cgcgctcgct ggccttgctg cgcacgctca gcgtggtgct cctggccttt gtggcatgtt ggggcccccct cttcctgctg ctgttgctcg acgtggcgtg cccggcgcgc acctgtcctg tactcctgca ggccgatccc ttcctgggac tggccatggc caactcactt ctgaacccca tcatctacac gctcaccaac cgcgacctgc gccacgcgct cctgcgcctg gtctgctgcg gacgccactc ctgcggcaga gacccgagtg gctcccagca gtcggcgagc gcggctgagg cttccggggg cctgcgccgc tgcctgcccc cgggccttga tgggagcttc agcggctcgg agcgctcatc gccccagcgc gacgggctgg acaccagcgg ctccacaggc agccccggtg cacccacagc cgccccggact ctggtatcag aaccggctgc agactga	A	Homo sapiens
563	189900	Sphingolipid Receptor Edg8	NP_110387.1	MESGLLRPAP VSEVIVLHYN YTGKLRGARY QPGAGLRADA VVCLAVCAFI VLENLAVLLV LGRHPRFHAP MFLLLGSLTL SDLLAGAAYA ANILLSGPLT LKLSPALWFA REGGVFVALT ASVLSLLAIA LERSLTMARR GPAPVSSRGR TLAMAAAAWG VSLLLGLLPA LGWNCLGRLD ACSTVLPLYA KAYVLFCVLA FVGILAAICA LYARIYCQVR ANARRLPARP GTAGTTSTRA RRKPRSLALL RTLSVVLLAF VACWGPLFLL LLLDVACPAR TCPVLLQADP FLGLAMANSL LNPIIYTLTN RDLRHALLRL VCCGRHSCGR DPSGSQQSAS AAEASGGLRR CLPPGLDGSF SGSERSSPQR DGLDTSGSTG SPGAPTAART LVSEPAAD	P	Homo sapiens
564	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	LG94029	gttgaggcac cgtgtgctgg ccttgtccct ccaggccaga gcgcggcagc ccttaccccc acagcgctgc agccctgcag ctggccctca gccctgggag gagccttcct tttccagaga gacctcgccc tgcactttca gcttccctat ggcctccgcc ttcctagagg cctcccggta gcgccactgc ctggagggtt ggtaggagct ctcgtcgctc actgggccct gccggccccg cgtgaggccc agcaaggccc ggctctggtg gaggaagttg gggctagaga agcagtagag cacggggtcc aggacactgt tgaggtaggt gaaggccagg gagccatgga agagctgtgt gcagaggtcc agggatcggc aggcggacag ccagaaagcc accatggaag ccatgccaaa gatgatgctg ggcaagaagc agatggtgta gacggccacc accatggcca gcacacgcat ggccctctgc gggcctgcct gcccgcccag accacggttc cggatggtga gcccaatgct cacaatagca aagaggatga gcgccagtgg caggaagaac tccagcaggt acagtgcctg gtgccagcgg agcgaggccg agggcttcgt gcccaccctg tagctgaggc aggaggggcc ggagaaggtg ctcaggagca ggtgcccgtt gaggagcagg atgcccaccc agagtccccc	A	Homo sapiens

				ggccacccgg gcagctgccc ccacggaagc acggctcagc acgtggtggg gctgcaccac cttcaggtag cggttgagtg cgatggctgt gaggaagaca acgctggccg tgcggttggt ggacagcatg aagaggttga ctttgcaggc agcagcccca aagcgccagg tctcatggag gaggtagtag tccacgcgga ggggcaggtt gctgatcagg aggaagtcag cggccaccag gctgaccagg aacaccgtgt tggaggtcca gggccgcgtg tggatgcaga agatgaagag ggccaaactg ttccccacca ggcccaggac aaactccagg gccaggattg gtgccaggaa ggcagacacc agcgaggaag aggtggggtg gcagggccct ccagaggacc cccccacagt ggtaaaggc		
565	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	CAC38933.1	MELHNLSSPS PSLSSSVLPP SFSPSPSSAP SAFTTVGGSS GGPCHPTSSS LVSAFLAPIL ALEFVLGLVG NSLALFIFCI HTRPWTSNTV FLVSLVAADF LLISNLPLRV DYYLLHETWR FGAAACKVNL FMLSTNRTAS VVFLTAIALN RYLKVVQPHH VLSRASVGAA ARVAGGLWVG ILLLNGHLLL STFSGPSCLS YRVGTKPSAS LRWHQALYLL EFFLPLALIL FAIVSIGLTI RNRGLGGQAG PQRAMRVLAM VVAVYTICFL PSIIFGMASM VAFWLSACRS LDLCTQLFHG SLAFTYLNSV LDPVLYCFSS PNFLHQSRAL LGLTRGRQGP VSDESSYQPS RQWRYREASR KAEAIGKLKV QGEVSLEKEG SSQG	P	Homo sapiens
566	189904	Purinergic Receptor P2U2 (GPR91)	NM_033050	ggttatggtt taactcagca gaatttgttg aacaactacg acatgctggg gatcatggca tggaatgcaa cttgcaaaaa ctggctggca gcagaggctg ccctggaaaa gtactacctt tccatttttt atgggattga gttcgttgtg ggagtccttg gaaataccat tgttgtttac ggctacatct tctctctgaa gaactggaac agcagtaata tttatctctt taacctctct gtctctgact tagcttttct gtgcaccctc cccatgctga taaggagtta tgccaatgga aactggatat atggagacgt gctctgcata agcaaccgat atgtgcttca tgccaacctc tataccagca ttctctttct cacttttatc agcatagatc gatacttgat aattaagtat cctttccgag aacaccttct gcaaaagaaa gagtttgcta ttttaatctc cttggccatt tgggttttag taaccttaga gttactaccc atacttcccc ttataaatcc tgttataact gacaatggca ccacctgtaa tgatttttgca agttctggag accccaacta caacctcatt tacagcatgt gtctaacact gttggggttc cttattcctc tttttgtgat gtgtttcttt tattacaaga ttgctctctt cctaaagcag aggaataggc aggttgctac tgctctgccc cttgaaaagc ctctcaactt ggtcatcatg gcagtggtaa tcttctctgt gctttttaca ccctatcacg tcatgcggaa tgtgaggatc gcttcacgcc tggggagttg gaagcagtat cagtgcactc aggtcgtcat caactccttt tacattgtga cacggccttt ggcctttctg aacagtgtca tcaaccctgt cttctatttt cttttgggag atcacttcag ggacatgctg atgaatcaac tgagacacaa cttcaaatcc cttacatcct ttagcagatg ggctcatgaa ctcctacttt cattcagaga aaagtgaggg gcttgtgaaa cagattgttc tacagatgaa tctgtaagcc agttacagtt tgccttaact catagacatc aatcagagag tgtcacagat ttaaccttga tctaaagaca agttgtaccc agagtatgtg aaaagaatgg gacgacaaga atgtactggt ttcttcctct aagaattgaa aggagttgaa ctgccttatg tttgggcatg taactccaaa atactaggta gtataaggct ttctcaatca gtgcaaaaat ggaagatata taaagcaaca agttgtctgc atttgatcac tggtcagatt gtaaaaaaaa aaaaaaaaaa	A	Homo sapiens
567	189904	Purinergic Receptor P2U2 (GPR91)	NP_149039.1	MAWNATCKNW LAAEAALEKY YLSIFYGIEF VVGVLGNTIV VYGYIFSLKN WNSSNIYLFN LSVSDLAFLC TLPMLIRSYA NGNWIYGDVL CISNRYVLHA NLYTSILFLT FISIDRYLII KYPFREHLLQ KKEFAILISL AIWVLVTLEL LPILPLINPV ITDNGTTCND FASSGDPNYN LIYSMCLTLL GFLIPLFVMC FFYYKIALFL KQRNRQVATA LPLEKPLNLV IMAVVIFSVL FTPYHVMRNV RIASRLGSWK QYQCTQVVIN SFYIVTRPLA FLNSVINPVF YFLLGDHFRD MLMNQLRHNF KSLTSFSRWA HELLLSFREK	P	Homo sapiens
568	189920	G Protein-Coupled Receptor GPR63 (PSP24	NM_030784	tggagccatg ctccctgggc tcttccgcgg gcgcccgcgc gctgcccttc gcttgaggca aaaggactct tgtggaagat ggaactcatt gtccatttc cagaatgtat ttccaagccc atcaatggga cctgatactg ctgttctgtg ttgaaatgct tgaagaactc ctgcatctct gcttgcatct tccatcctac tgaaaccatg gtcttctcgg cagtgttgac tgcgttccat accgggacat ccaacacaac	A	Homo sapiens

		beta)		atttgtcgtg tatgaaaaca cctacatgaa tattacactc cctccaccat tccagcatcc tgacctcagt ccattgctta gatatagttt tgaaaccatg gctcccactg gtttgagttc cttgaccgtg aatagtacag ctgtgcccac aacaccagca gcatttaaga gcctaaactt gcctcttcag atcacccttt ctgctataat gatattcatt ctgtttgtgt cttttcttgg gaacttggtt gtttgcctca tggtttacca aaaagctgcc atgaggtctg caattaacat cctccttgcc agcctagctt ttgcagacat gttgcttgca gtgctgaaca tgccctttgc cctggtaact attcttacta cccgatggat tttgggaaa ttcttctgta gggtatctgc tatgtttttc tggttatttg tgatagaagg agtagccatc ctgctcatca ttagcataga taggttcctt attatagtcc agaggcagga taagctaaac ccatatagag ctaaggttct gattgcagtt tcttgggcaa cttcctttg tgtagctttt cctttagccg taggaaaccc cgacctgcag ataccttccc gagctcccca gtgtgtgttt gggtacacaa ccaatccagg ctaccaggct tatgtgattt tgatttctct catttctttc ttcataccct tcctggtaat actgtactca tttatgggca tactcaacac ccttcggcac aatgccttga ggatccatag ctaccctgaa ggtatatgcc tcagccaggc cagcaaactg ggtctcatga gtctgcagag acctttccag atgagcattg acatgggctt taaaacacgt gccttcacca ctattttgat tctctttgct gtcttcattg tctgctgggc cccattcacc acttacagcc ttgtggcaac attcagtaag cacttttact atcagcacaa cttttttgag attagcacct ggctactgtg gctctgctac ctcaagtctg cattgaatcc gctgatctac tactggagga ttaagaaatt ccatgatgct tgcctggaca tgatgcctaa gtccttcaag ttttgccgc agctccctgg tcacacaaag cgacggatac gtcctagtgc tgtctatgtg tgtggggaac atcggacggt ggtgtgaata ttggaactgg ctgacatttt gggtgatgct tgttctttat tgacattgaa ttctctttct catagcctct ccactttatt tttttttata gggtttgtgt atgtatgtgt gtgagcagtg taaagaaaga atggtaatta tagttctgtt accaagaata aataatagga aagtgattac aaatattacc tccagggttc aatagaaatc ctcaatttag ggtgaggaga cttttttttg gtttggggt ttttccttga ttgattttgt tttcatagtg ggaatcagga ttgtgcttta ttgagcctgc agttacattg aattgtaggt gtttcgtgtg ctgctaaggt atgcttattt gagtttatca agactttttt ttttctggaa gacactgctg cttttaccat cacattggag cc		
569	189920	G Protein-Coupled Receptor GPR63 (PSP24 beta)	NP_110411.1	MVFSAVLTAF HTGTSNTTFV VYENTYMNIT LPPPFQHPDL SPLLRYSFET MAPTGLSSLT VNSTAVPTTP AAFKSLNLPL QITLSAIMIF ILFVSFLGNL VVCLMVYQKA AMRSAINILL ASLAFADMLL AVLNMPFALV TILTTRWIFG KFFCRVSAMF FWLFVIEGVA ILLIISIDRF LIIVQRQDKL NPYRAKVLIA VSWATSFCVA FPLAVGNPDL QIPSRAPQCV FGYTTNPGYQ AYVILISLIS FFIPFLVILY SFMGILNTLR HNALRIHSYP EGICLSQASK LGLMSLQRPF QMSIDMGFKT RAFTTILILF AVFIVCWAPF TTYSLVATFS KHFYYQHNFF EISTWLLWLC YLKSALNPLI YYWRIKKFHD ACLDMMPKSF KFLPQLPGHT KRRIRPSAVY VCGEHRTVV	P	Homo sapiens
570	189945	G Protein-Coupled Receptor Dj287g14.2	AK027843	ttgcttgagt catcttctga agctttaaaa acaattgatg aattggcctt caagatagac ctaaatagca catcacatgt gaatattaca actcggaact tggctctcag cgtatcatcc ctgttaccag ggacaaatgc aatttcaaat tttagcattg gtcttccaag caataatgaa tcgtatttcc agatggattt tgagagtgga caagtggatc cactggcatc tgtaattttg cctccaaact tacttgagaa tttaagtcca gaagattctg tattagttag aagagcacag tttactttct tcaacaaaac tggacttttc caggatgtag gaccccaaag aaaaacttta gtgagttatg tgatggcgtg cagtattgga aacattacta tccagaatct gaaggatcct gttcaaataa aaatcaaaca tacaagaact caggaagtgc atcatcccat ctgtgccttc tgggatctga acaaaaacaa aagttttgga ggatggaaca cgtcaggatg tgttgcacac agagattcag atgcaagtga gacagtctgc ctgtgtaacc acttcacaca ctttggagtt ctgatggacc ttccaagaag tgcctcacag ttagatgcaa gaaacactaa agtcctcact ttcatcagct atattgggtg tggaatatct gctatttttt cagcagcaac tctcctgaca tatgttgctt ttgagaaatt gcgaagggat tatccctcca aaatcttgat gaacctgagc acagccctgc tgttcctgaa tctcctcttc ctcctagatg gctggatcac ctccttcaat gtggatggac tttgcattgc tgttgcagtc ctgttgcatt tcttccttct ggcaaccttt acctggatgg ggctagaagc aattcacatg tacattgctc tagttaaagt atttaacact tacattcgcc gatacattct aaaattctgc atcattggct ggggtttgcc tgccttagtg gtgtcagttg ttctagcgag cagaaacaac aatgaagtct atggaaaaga aagttatggg aaagaaaaag gtgatgaatt ctgttggatt caagatccag tcatatttta tgtgacctgt	A	Homo sapiens

				gctgggtatt ttggagtcat gtttttctg aacattgcca tgttcattgt ggtaatggtg cagatctgtg ggaggaatgg caagagaagc aaccggaccc tgagagaaga agtgttaagg aacctgcgca gtgtggttag cttgaccttt ctgttgggca tgacatgggg ttttgcattc tttgcctggg gacccttaaa tatccccttc atgtacctct tctccatctt caattcatta caaggcttat ttatattcat cttccactgt gctatgaagg agaatgttca gaaacagtgg cggcggcatc tctgctgtgg tagatttcgg ttagcagata actcagattg gagtaagaca gctaccaata tcatcaagaa aagttctgat aatctaggaa aatctttgtc ttcaagctcc attggttcca actcaaccta tcttacatcc aaatctaaat ccagctctac cacctatttc aaaaggaata gccacacaga taatgtctcc tatgagcatt ccttcaacaa aagtggatca ctcagacagt gcttccatgg acaagtcctt gtcaaaactg gcccatgctg atggagatca aacatcaatc atccctgtcc atcaggtcat tgataaggtc aagggttatt gcaatgctca ttcagacaac ttctataaaa atattatcat gtcagacacc ttcagccaca gcacaaagtt ttaatgtctt taagaaaaag aaatcaatct gcagaaatgt gaagatttgc aagcagtgta aactgcaact agtgatgtaa atgtgctatt acctaggtaa ctgcatatat ataaggaatg tattttgtta agaaggcttt tgtgaaattc agaatttttc tttttaatat atttcttcca tggaagagtt gtcatcacta aaacttcagt actgagagta acatgactca gtagccacag aagctatgat ttgtaaaata tataattgaa tcagagtaat cataatgcag gggagacatt caaattagag acaagggaga agcaatgctg aggaagaccc tagatagagc tcatttttact ccacctaatc gttatatctg gatataccca ttttctgcat cttctttctc aacaataaac tgtccttgct ttggagactt taagacattt cctaaagcac aaataaaagc ctcgtatttc cccattgaga gttttgttcc aaggaatatg aagtgagaca tatgggtgag tcataataat caaaataatt tatgaagagc tgggtctgca atagctagtc taaaaactac ttgtgtgtca gtcctctggt tatagtatat aagagcctga ggaggtctgg caagatagat ggtgtattat ttatggatca ggctgctgca tacaaacctt gcatactatt atgcagctta cctaactctc agactattct gagtaatgct tgcttgctaa tgaatgtata ggagaccaca ttgtaattgt tcttagatga tggagtccat gcagtttctt agaaatcggt ctcagtgcat gctgtgcttt ttcacatttg ctctgggtta tctgggaagt atcaggttct gggaggcaac agcattaagt gataagaaaa ggagacattc tggcaaagcc aatctgctta aaggcaaagt ccagaacctg gaacctagag gcctttctct ctgcacgaaa aacaggtagt ttgcagtctg agatatggga gagcttttag gctacacagc aacccaaggg acctctcacc ttttgctgag cttcaatcag gaagctattt gcctggctcc agcagatgat gagataatga ggtagtgggt tttttattac tgttccattt tgcaacatcc tgcaacacca tcctgggaga caagagcatt acccagcttg gctttcacgg gggagggttg tattcagt		
571	189945	G Protein-Coupled Receptor Dj287g14.2	BAB55406	MDFESGQVDP LASVILPPNL LENLSPEDSV LVRRAQFTFF NKTGLFQDVG PQRKTLVSYV MACSIGNITI QNLKDPVQIK IKHTRTQEVH HPICAFWDLN KNKSFGGWNT SGCVAHRDSD ASETVCLCNH FTHFGVLMDL PRSASQLDAR NTKVLTFISY IGCGISAIFS AATLLTYVAF EKLRRDYPSK ILMNLSTALL FLNLLFLLDG WITSFNVDGL CIAVAVLLHF FLLATFTWMG LEAIHMYIAL VKVFNTYIRR YILKFCIIGW GLPALVVSVV LASRNNNEVY GKESYGKEKG DEFCWIQDPV IFYVTCAGYF GVMFFLNIAM FIVVMVQICG RNGKRSNRTL REEVLRNLRS VVSLTFLLGM TWGFAFFAWG PLNIPFMYLF SIFNSLQGLF IFIFHCAMKE NVQKQWRRHL CCGRFRLADN SDWSKTATNI IKKSSDNLGK SLSSSSIGSN STYLTSKSKS SSTTYFKRNS HTDNVSYEHS FNKSGSLRQC FHGQVLVKTG PC	P	Homo sapiens
572	190026	G Protein-Coupled Receptor JEG18	NM_032553	caccattagg caaagatagt ttctctagag agaatcatgc ctgctaatta cacgtgtacc aggccagatg gagacaatac agatttcga tactttattt atgcagtgac atacactgtc attcttgtgc caggtctcat agggaatata ttagccctgt gggtattcta tggttatatg aaagaaacaa aacgagctgt gatatttatg ataaacttag ccattgctga cttactacaa gttctttcct tgccactgag gatcttctac tacttgaatc atgactggcc atttgggcct ggtctctgca tgttctgttt ctacctgaag tatgtcaaca tgtatgcaag catctacttc ttggtctgca tcagtgtgcg acgattttgg tttctcatgt accccttcg cttccatgac tgcaaacaga aatatgacct gtacatcagc attgctggct ggctgatcat ctgccttgcc tgtgtactct ttccactcct cagaaccagt gatgatacct ctggcaatag gaccaaatgc tttgtggatc ttcctaccag gaatgtcaac ctggcccagt ccgttgttat gatgaccatt ggcgagttga ttgggtttgt	A	Homo sapiens

				aactccgctt ctgattgtcc tatattgtac ctggaagacg gttttatcac tgcaagataa atatcccatg gcccaagatc ttggagagaa acagaaagcc ttgaagatga ttctaacctg tgcaggggta ttcctaattt gctttgcacc ttatcatttc agttttcctt tagatttcct ggtgaagtcc aatgaaatta aaagctgcct agccagaagg gtgattctaa tatttcattc tgtggcattg tgtcttgcta gtctgaattc atgtcttgac ccagtcatat actactttc cactaatgag ttccgaagac ggctttcaag acaagatttg catgacagca tccaactcca tgcaaaatcc tttgtgagta accatacagc ttccaccatg acacctgaat tatgctaaaa caaaaaacca aactgaatgt gacctgaaat gcaagtacat cagaacatat ctgcaatacc caagccacag ggaagaactt gcaaaacaac acagcttttc agttctgctc tatcttactg ctatggggaa ttcacttctt caaagcagga cctatttgga gcattacgat ccacgattat tgatgttgac atgtccatgt agtaattttt cttcaagt		
573	190026	G Protein-Coupled Receptor JEG18	NP_115942.1	MPANYTCTRP DGDNTDFRYF IYAVTYTVIL VPGLIGNILA LWVFYGYMKE TKRAVIFMIN LAIADLLQVL SLPLRIFYYL NHDWPFGPGL CMFCFYLKYV NMYASIYFLV CISVRRFWFL MYPFRFHDCK QKYDLYISIA GWLIICLACV LFPLLRTSDD TSGNRTKCFV DLPTRNVNLA QSVVMMTIGE LIGFVTPLLI VLYCTWKTVL SLQDKYPMAQ DLGEKQKALK MILTCAGVFL ICFAPYHFSF PLDFLVKSNE IKSCLARRVI LIFHSVALCL ASLNSCLDPV IYYFSTNEFR RRLSRQDLHD SIQLHAKSFV SNHTASTMTP ELC	P	Homo sapiens
574	190031	G Protein-Coupled Receptor VLGR1	AF055084	attactgtat atgtatgtat tcagccgtga ttcccaaagg ttcattttat gacagcatct ttctgatttc ctcacagttt attatcttcc cattgcccaa gtttagtaac tttatattag ttttggcttc gtacaggcac cactcattgg gagcaacaca gaaatctgtt tcaaaacatc atttcaggaa aaagagaata ttttagcgtt gaggatcttt aaaagtattg cagtacttta tagaactaag ttgtaggagc taagaggatc ttttaattca tgctatgcaa ttatgtattt tttgttgttg ttgtatttta ttttattttg atttgtatga ctttggaaga gggtatgatt ttaccattca agaaaatgga cttcagatag atcaacctcc tgaaatagga aacatctcca ttgttcgcat cataataatg aaaaatgata acgcagaagg catcattgaa tttgacccaa agtatactgc cttcgaagtg gaggaagatg ttgggctgat catgatccca gtggtgaggc tacatggaac ttatggctat gtgacagctg atttcatctc tcagagctcc tctgccagtc ccggaggtgt tgattacatt ttgcatggca gtacagtcac ctttcagcat gggcaaaact taagttttat aaatatctcc atcattgatg acaatgaaag tgaatttgag gagcccattg aaattctact cactggagct actggaggag cggtccttgg gcgccaccta gtgagcagaa tcataatagc taagagtgac tctccctttg gagttataag gtttctcaat caaagcaaaa tttctattgc taatcccaat tccacaatga ttttatcact ggtgctggag cggactggag gactcttggg agagattcag gtgaactggg agacagtagg acccaactct caagaagcct tactgccaca gaatagagac attgcagacc cagtgagcgg ggttgttctat tttggagaag gagaaggagg agtgagaacc ataattctga caatctatcc tcatgaagaa attgaagttg aagagacatt cattattaaa cttcatcttg tgaaaggaga agctaaatta gactccagag ctaaagatgt tacattaacc atacaagagt ttggtgaccc aaatggagtt gttcagtttg ctcctgaaac tttgtctaag aagacttatt cagagcctct ggctctggaa gggcccctgc tcattacctt ctttgtcaga agagtcaagg gcacctttgg agagattatg gtttactggg aattaagtag tgagtttgac attactgaag actttctttc caccagtgga tttttcacca ttgctgatgg agagagtgaa gctagctttg atgttcattt gctaccagat gaggtacctg agatagagga agattatgtg atccagcttg tttctgtaga gggaggagcc gaactggatc tggagaagag tatcacatgg ttctctgttt atgcaaatga tgacccacat ggagtatttg ccctgtattc ggatcgccag tcaatactta ttgggcagaa ccttattaga tccatccaaa ttaacataac ccggcttgct ggaacatttg gagatgtggc tgttgggctt cgaatatcat cggatcataa agaacagccg attgttaccg aaaatgcaga gaggcagctg gtggtcaaag atggtgccac atataaagtg gacgtggtgc caataaagaa tcaggtcttc ctatcactgg gctctaattt cactttgcaa ctggtgactg tgatgcttgt cggtggacgt ttctatggaa tgccaacaat tcttcaggaa gcaaaatctg ctgtccttcc agtctctgag aaagctgcca attctcaggt cggatttgaa tccactgctt ttcaactcat gaacatcact gctggcacaa gccacgttat gatttctagg agaggcacat atggagctct ctcggttgcc tggaccactg gatatgctcc tgggttagaa attcctgaat tcattgttgt tggcaacatg accccaacac tggggagcct ttcattttcc cacggtgaac aaaggaaagg agtttcctg tggacgtttc ctagccctgg	A	Homo sapiens

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aaaaggtacc acaggttgaa gtgtattttt ttgtggaact atatgaagct actgctggag cagcaataaa caacagtgcc
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aaggccactt taatcagtct gcaggtggcc agagattctg ggacaggact aatgatgtct gttaacttta gtacccagga
gttgaggagt gctgaaacaa ttggtcgtac catcatatct ccagctattt ctggaaagga ttttgtgata actgaaggca cattggtctt
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cgcaggccat ttgggggctt gcagatcagc tacatcagcc tgtgaatgat gatattctca acagagtgct ccataccatc
agcatgaaag tggccacaga aaacacagat gaacaactca gtgccatgat gcatctaata gaaaagataa ctactgaagg
aaaaattcaa gctttcagtg ttgccagccg aactcttttc tatgagattc tttgttctct tattaaccca aagcgcaagg acactagggg
attcagtcac tttgctgaag tgactgagaa ttttgccttt tctctgctga ctaatgttac ttgcggctct cctggtgaaa aaagcaaaac
catccttgat agttgcccat atttgtcaat attggctctt cactggtatc ctcagcaaat caatggacac aagtttgaag gaaaggaagg
agattacatt cgaattccag agaggctact ggatgtccag gatgcagaaa taatggctgg gaaaagtaca tgtaaattag
tccagtttac agagtatagc agccaacagt ggtttataag tggaaacaat cttcctaccc taaaaaataa ggtattatct ttgagtgtga
aaggtcagag ttcacaactc ctgactaatg acaatgaggt tctctacagg atttatgctg ctgagcctag aattattcct cagacatctc
tgtgtctcct ttggaatcag gctgctgcaa gctggttgtc tgacagtcag ttttgcaaag tgattgagga aactgcagac tatgtggaat
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gctatggctg ctgtcacaca ttacctgtat ctttgccagt ttagctggat gctcattcag tctgtgaatt tctggtacgt gctggtgatg
aatgatgagc acacagagag gcgatatctg ctgtttttcc ttctgagttg gggactacca gcttttgtgg tgattctcct catagttatt
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tatgatgatg tcttcagagg aaggacaaat gctgcagaaa ttccactgat tttatatctc tttgctctga tttccgtgac atggctttgg

				ggaggactac acatggccta cagacacttc tggatgttgg ttctctttgt cattttcaac agtctgcagg gactttatgt tttcatggtt tatttcattt tacacaacca aatgtgttgc cctatgaagg ccagttacac tgtggaaatg aatgggcatc ctggacccag cacagccttt ttcacgcccg ggagtggaat gcctcctgct ggaggggaaa tcagcaagtc cacccagaat ctcatcggtg ctatggagga ggtgccacct gactgggaga gagcatcctt ccaacagggc agtcaggcca gccctgattt aaagccaagt ccacaaaatg gagccacgtt cccgtcctct ggaggatatg gccaggggtc actgatagcc gatgaggagt cccaggagtt tgatgattta atatttgcat taaaaactgg tgctggtctc agtgtcagtg ataatgaatc tggtcaaggc agccaggagg ggggcacctt gactgactcc cagatcgtgg agctcaggag gatacccatc gccgacactc acctgtagca cctcactaac cattcgactg agcacacttt catatttgta tcagcttttg tgctaaaact ctctaagtac atccacctgt gtaataggaa cctgtgaatt gtactggatg attaatacaa acgtgattgt tgtatttgga gtataaatta ctgattgtat gtgacctgaa aattcactgc tataagaaag gtggagtcag tttgtatcag ttaataggat gttcatattc caaggatatt agttgttttt ttaatcatcc tatatggcta acattgttta atgaaagtaa taatcaataa agcaatagaa tct		
575	190031	G Protein-Coupled Receptor VLGR1	AAD55586.1	MQLCIFCCCC ILFYFDLYDF GRGYDFTIQE NGLQIDQPPE IGNISIVRII IMKNDNAEGI IEFDPKYTAF EVEEDVGLIM IPVVRLHGTY GYVTADFISQ SSSASPGGVD YILHGSTVTF QHGQNLSFIN ISIIDDNESE FEEPIEILLT GATGGAVLGR HLVSRIIIAK SDSPFGVIRF LNQSKISIAN PNSTMILSLV LERTGGLLGE IQVNWETVGP NSQEALLPQN RDIADPVSGL FYFGEGEGGV RTIILTIYPH EEIEVEETFI IKLHLVKGEA KLDSRAKDVT LTIQEFGDPN GVVQFAPETL SKKTYSEPLA LEGPLLITFF VRRVKGTFGE IMVYWELSSE FDITEDFLST SGFFTIADGE SEASFDVHLL PDEVPEIEED YVIQLVSVEG GAELDLEKSI TWFSVYANDD PHGVFALYSD RQSILIGQNL IRSIQINITR LAGTFGDVAV GLRISSDHKE QPIVTENAER QLVVKDGATY KVDVVPIKNQ VFLSLGSNFT LQLVTVMLVG GRFYGMPTIL QEAKSAVLPV SEKAANSQVG FESTAFQLMN ITAGTSHVMI SRRGTYGALS VAWTTGYAPG LEIPEFIVVG NMTPTLGSLS FSHGEQRKGV FLWTFPSPGW PEAFVLHLSG VQSSAPGGAQ LRSGFIVAEI EPMGVFQFST SSRNIIVSED TQMIRLHVQR LFGFHSDLIK VSYQTTAGSA KPLEDFEPVQ NGELFFQKFQ TEVDFEITII NDQLSEIEEF FYINLTSVEI RGLQKFDVNW SPRLNLDFSV AVITILDNDD LAGMDISFPE TTVAVAVDTT LIPVETESTT YLSTSKTTTI LQPTNVVAIV TEATGVSAIP EKLVTLHGTP AVSEKPDVAT VTANVSIHGT FSLGPSIVYI EEEMKNGTFN TAEVLIRRTG GFTGNVSITV KTFGERCAQM EPNALPFRGI YGISNLTWAV EEEDFEEQTL TLIFLDGERE RKVSVQILDD DEPEGQEFFY VFLTNPQGGA QIVEGKDDTG FAAFAMVIIT GSDLHNGIIG FSEESQSGLE LREGAVMRRL HLIVTRQPNR AFEDVKVFWR VTLNKTVVVL QKDGVNLMEE LQSVSGTTTC TMGQTKCFIS IELKPEKVPQ VEVYFFVELY EATAGAAINN SARFAQIKIL ESDESQSLVY FSVGSRLAVA HKKATLISLQ VARDSGTGLM MSVNFSTQEL RSAETIGRTI ISPAISGKDF VITEGTLVFE PGQRSTVLDV ILTPETGSLN SFPKRFQIVL FDPKGGARID KVYGTANITL VSDADSQAIW GLADQLHQPV NDDILNRVLH TISMKVATEN TDEQLSAMMH LIEKITTEGK IQAFSVASRT LFYEILCSLI NPKRKDTRGF SHFAEVTENF AFSLLTNVTC GSPGEKSKTI LDSCPYLSIL ALHWYPQQIN GHKFEGKEGD YIRIPERLLD VQDAEIMAGK STCKLVQFTE YSSQQWFISG NNLPTLKNKV LSLSVKGQSS QLLTNDNEVL YRIYAAEPRI IPQTSLCLLW NQAAASWLSD SQFCKVIEET	P	Homo sapiens

				ADYVECACSH MSVYAVYART DNLSSYNEAF FTSGFICISG LCLAVLSHIF CARYSMFAAK LLTHMMAASL GTQILFLASA YASPQLAEES CSAMAAVTHY LYLCQFSWML IQSVNFWYVL VMNDEHTERR YLLFFLLSWG LPAFVVILLI VILKGIYHQS MSQIYGLIHG DLCFIPNVYA ALFTAALVPL TCLVVVFVVF IHAYQVKPQW KAYDDVFRGR TNAAEIPLIL YLFALISVTW LWGGLHMAYR HFWMLVLFVI FNSLQGLYVF MVYFILHNQM CCPMKASYTV EMNGHPGPST AFFTPGSGMP PAGGEISKST QNLIGAMEEV PPDWERASFQ QGSQASPDLK PSPQNGATFP SSGGYGQGSL IADEESQEFD DLIFALKTGA GLSVSDNESG QGSQEGGTLT DSQIVELRRI PIADTHL		
576	190168	G Protein-Coupled Receptor GPR58	NM_014626	atgtattcat ttatggcagg atccatattc atcacaatat ttggcaatct tgccatgata atttccattt cctacttcaa gcagcttcac acaccaacca acttcctcat cctctccatg gccatcactg atttcctcct gggattcacc atcatgccat atagtatgat cagatcggtg gagaactgct ggtattttgg gcttacattt tgcaagattt attatagttt tgacctgatg cttagcataa catccatttt tcatctttgc tcagtggcca ttgatagatt ttatgctata tgttacccat tactttattc caccaaaata actattccag tcattaaaag attgctactt ctatgttggt cggtccctgg agcatttgcc ttcggggcgg tcttctcaga ggcctatgca gatggaatag agggctatga catcttggtt gcttgttcca gttcctgccc agtgatgttc aacaagctat gggggaccac cttgtttatg gcaggtttct tcactcctgg gtctatgatg gtggggattt acggcaaaat tttgcagta tccagaaaac atgctcatgc catcaataac ttgcgagaaa atcaaaataa tcaagtgaag aaagacaaaa aagctgccaa aactttagga atagtgatag gagttttctt attatgttgg tttccttgtt tcttcacaat tttattggat ccctttttga acttctctac tcctgtagtt ttgtttgatg ccttgacatg gtttggctat tttaactcca catgtaatcc gttaatatat ggtttcttct atccctggtt tcgcagagca ctgaagtaca ttttgctagg taaaattttc agctcatgtt tccataatac tattttgtgt atgcaaaaag aaagtgagta g	A	Homo sapiens
577	190168	G Protein-Coupled Receptor GPR58	NP_055441.1	MYSFMAGSIF ITIFGNLAMI ISISYFKQLH TPTNFLILSM AITDFLLGFT IMPYSMIRSV ENCWYFGLTF CKIYYSFDLM LSITSIFHLC SVAIDRFYAI CYPLLYSTKI TIPVIKRLLL LCWSVPGAFA FGAVFSEAYA DGIEGYDILV ACSSSCPVMF NKLWGTTLFM AGFFTPGSMM VGIYGKIFAV SRKHAHAINN LRENQNNQVK KDKKAAKTLG IVIGVFLLCW FPCFFTILLD PFLNFSTPVV LFDALTWFGY FNSTCNPLIY GFFYPWFRRA LKYILLGKIF SSCFHNTILC MQKESE	P	Homo sapiens
578	190170	G Protein-Coupled Receptor GPR57	NM_014627	atggatctaa cttatattcc cgaagaccta tccagttgtc caaaatttgt aaataagatc ctgtcctccc accaaccgct cttttcatgt ccaggtgata atgtattcgg ttatgactgg agccatgatt atccactatt cggaaacttg gttataatgg tttccatatc gcatttcaaa cagcttcact ctcccacaaa ctttctgatc ctctccatgg caaccacgga ctttctgctg ggttttgtca ttatgccata cagcataatg cgatcagtgg agagttgctg gtactttggg gatggctttt gtaaattcca cacaagcttt gacatgatgc tcagactgac ctccattttc cacctctgtt ccattgctat tgaccgattt tatgccgtgt gttacccttt acattacaca accaaaatga cgaactccac cataaagcaa ctgctggcat tttgctggtc agttcctgct cttttttctt ttggtttagt tctatctgag gccgatgttt ccggtatgca gagctataag atacttgttg cttgcttcaa tttctgtgcc cttactttca acaaattctg gggacaata ttgttcacta catgtttctt taccoctggc tccatcatgg ttggtattta tggcaaaatc tttatcgttt ccaaacagca tgctcgagtc atcagccatg tgcctgaaaa cacaaagggg gcagtgaaaa aacacctatc caagaaaaag gacaggaaag cagcgaagac actgggtata gtaatggggg tgtttctggc ttgctggttg ccttgtttc ttgctgttct gattgaccca tacctagact actccactcc catactaata ttggatcttt tagtgtggct ccggtacttc aactctactt gcaaccctct tattcatggc ttttaatc catggtttca gaaagcattc aagtacatag tgtcaggaaa aatatttagc tcccattcag aaactgcaaa tttgtttcct gaagcacatt aa	A	Homo sapiens
579	190170	G Protein-Coupled Receptor	NP_055442.1	MDLTYIPEDL SSCPKFVNKI LSSHQPLFSC PGDNVFGYDW SHDYPLFGNL VIMVSISHFK QLHSPTNFLI LSMATTDFLL GFVIMPYSIM RSVESCWYFG	P	Homo sapiens

		GPR57		DGFCKFHTSF DMMLRLTSIF HLCSIAIDRF YAVCYPLHYT TKMTNSTIKQ LLAFCWSVPA LFSFGLVLSE ADVSGMQSYK ILVACFNFCA LTFNKFWGTI LFTTCFFTPG SIMVGIYGKI FIVSKQHARV ISHVPENTKG AVKKHLSKKK DRKAAKTLGI VMGVFLACWL PCFLAVLIDP YLDYSTPILI LDLLVWLRYF NSTCNPLIHG FFNPWFQKAF KYIVSGKIFS SHSETANLFP EAH		
580	190188	G Protein-Coupled Receptor LGR6	AB049405	gccactgcca ggaggacggc atcatgctgt ctgccgactg ctctgagctc gggctgtccg ccgttccggg ggacctggac cccctgacgg cttacctgga cctcagcatg aacaacctca cagagcttca gcctggcctc ttccaccacc tgcgcttctt ggaggagctg cgtctctctg ggaaccatct ctcacacatc ccaggacaag cattctctgg tctctacagc ctgaaaatcc tgatgctgca gaacaatcag ctgggaggaa tccccgcaga ggcgctgtgg gagctgccga gcctgcagtc gctgcgccta gatgccaacc tcatctccct ggtcccggag aggagctttg aggggctgtc ctccctccgc cacctctggc tggacgacaa tgcactcacg gagatccctg tcagggccct caacaacctc cctgccctgc aggccatgac cctggccctc aaccgcatca gccacatccc cgactacgcg ttccagaatc tcaccagcct tgtggtgctg catttgcata acaaccgcat ccagcatctg gggacccaca gcttcgaggg gctgcacaat ctggagacac tagacctgaa ttataacaag ctgcaggagt tccctgtggc catccggacc ctgggcagac tgcaggaact ggggttccat aacaacaaca tcaaggccat cccagaaaag gccttcatgg ggaaccctct gctacagacg atacactttt atgataaccc aatccagttt gtgggaagat cggcattcca gtacctgcct aaactccaca cactatctct gaatggtgcc atggacatcc aggagtttcc agatctcaaa ggcaccacca gcctggagat cctgaccctg acccgcgcag gcatccggct gctcccatcg ggatgtgcc aacagctgcc caggctccga gtcctggaac tgtctcacaa tcaaattgag gagctgccca gcctgcacag gtgtcagaaa ttggaggaaa tcggcctcca acacaaccgc atctgggaaa ttggagctga caccttcagc cagctgagct ccctgcaagc cctggatctt agctggaacg ccatccggtc catccaccct gaggccttct ccaccctgca ctccctggtc aagctggacc tgacagacaa ccagctgacc acactgcccc tggctggact tgggggcttg atgcatctga agctcaaagg gaaccttgct ctctcccagg ccttctccaa ggacagtttc ccaaaactga ggatcctgga ggtgccttat gcctaccagt gctgtcccta tgggatgtgt gccagcttct tcaaggcctc tgggcagtgg gaggctgaag accttcacct tgatgatgag gagtcttcaa aaaggcccct gggcctcctt gccagacaag cagagaacca ctatgaccag gacctggatg agctccagct ggagatggag gactcaaagc cacaccccag tgtccagtgt agccctactc caggcccctt caagccctgt gagtacctct ttgaaagctg ggcatccgc ctggccgtgt gggccatcgt gttgctctcc gtgctctgca atggactggt gctgctgacc gtgttcgctg gcgggcctgc ccccctgccc ccggtcaagt ttgtggtagg tgcgattgca ggcgccaaca ccttgactgg catttcctgt ggccttctag cctcagtcga tgccctgacc tttggtcagt tctctgagta cggagcccgc tgggagacgg ggctaggctg ccgggccact ggcttcctgg cagtacttgg gtcggaggca tcggtgctgc tgctcactct ggccgcagtg cagtgcagcg tctccgtctc ctgtgtccgg gcctatggga agtccccctc cctgggcagc gttcgagcag gggtcctagg ctgcctggca ctggcagggc tggccgccgc actgcccctg gcctcagtgg gagaatacgg ggcctcccca ctctgcctgc cctacgcgcc acctgagggt cagccagcag ccctgggctt caccgtggcc ctggtgatga tgaactcctt ctgtttcctg gtcgtggccg gtgcctacat caaactgtac tgtgacctgc cgcggggcga ctttgaggcc gtgtgggact gcgccatggt gaggcacgtg gcctggctca tcttcgcaga cgggctcctc tactgtcccg tggccttcct cagctttgcc tccatgctgg gcctcttccc tgtcacgccc gaggccgtca agtctgtcct gctggtggtg ctgcccctgc ctgcctgcct caacccactg ctgtacctgc tcttcaaccc ccacttccgg gatgaccttc ggcggcttcg gccccgcgca ggggactcag ggcccctagc ctatgctgcg gccggggagc tggagaagag ctcctgtgat tctacccagg ccctggtagc cttctctgat gtggatctca ttctggaagc ttctgaagct gggcggcccc ctgggctgga gacctatggc ttcccctcag tgaccctcat ctcctgtcag cagccagggg cccccaggct ggagggcagc cattgtgtag agccagaggg gaaccacttt gggaaccccc aaccctccat ggatggagaa ctgctgctga gggcagaggg atctacgcca gcaggtggag gcttgtcagg gggtggcggc tttcagccct ctggcttggc ctttgcttca cacgtgtaaa tatccctccc cattcttctc ttcccctctc	A	Homo sapiens

				ttcccttcc tctctccccc tcggtgaatg atggctgctt ctaaaacaaa tacaaccaaa actcagcagt gtgatctata gcaggatggc ccagtacctg gctccactga tcacctctct cctgtgacca tcaccaacgg gtgcctcttg gcctggcttt cccttggcct tcctcagctt caccttgata ctgggcctct tccttgtcat gtctgaagct gtggaccaga gacctggact tttgtctgct taagggaaat gagggaagta aagacagtga aggggtggag ggttgatca		
581	190188	G Protein-Coupled Receptor LGR6	AAG17168.1	MRLEGEGRSA RAGQNLSRAG SARRGAPRDL SMNNLTELQP GLFHHLRFLE ELRLSGNHLS HIPGQAFSGL YSLKILMLQN NQLGGIPAEA LWELPSLQSL DLNYNKLQEF PVAIRTLGRL QELGFHNNNI KAIPEKAFMG NPLLQTIHFY DNPIQFVGRS AFQYLPKLHT LSLNGAMDIQ EFPDLKGTTS LEILTLTRAG IRLLPSGMCQ QLPRLRVLEL SHNQIEELPS LHRCQKLEEI GLQHNRIWEI GADTFSQLSS LQALDLSWNA IRSIHPEAFS TLHSLVKLDL TDNQLTTLPL AGLGGLMHLK LKGNLALSQA FSKDSFPKLR ILEVPYAYQC CPYGMCASFF KASGQWEAED LHLDDEESSK RPLGLLARQA ENHYDQDLDE LQLEMEDSKP HPSVQCSPTP GPFKPCEYLF ESWGIRLAVW AIVLLSVLCN GLVLLTVFAG GPVPLPPVKF VVGAIAGANT LTGISCGLLA SVDALTFGQF SEYGARWETG LGCRATGFLA VLGSEASVLL LTLAAVQCSV SVSCVRAYGK SPSLGSVRAG VLGCLALAGL AAALPLASVG EYGASPLCLP YAPPEGQPAA LGFTVALVMM NSFCFLVVAG AYIKLYCDLP RGDFEAVWDC AMVRHVAWLI FADGLLYCPV AFLSFASMLG LFPVTPEAVK SVLLVVLPLP ACLNPLLYLL FNPHFRDDLR RLRPRAGDSG PLAYAAAGEL EKSSCDSTQA LVAFSDVDLI LEASEAGRPP GLETYGFPSV TLISCQQPGA PRLEGSHCVE PEGNHFGNPQ PSMDGELLLR AEGSTPAGGG LSGGGGFQPS GLALLHTY	P	Homo sapiens
582	190414	G Protein-coupled Receptor GPR101	AF411115	atgacgtcca cctgcaccaa cagcacgcgc gagagtaaca gcagccacac gtgcatgccc ctctccaaaa tgcccatcag cctggcccac ggcatcatcc gctcaaccgt gctggttatc ttcctcgccg cctctttcgt cggcaacata gtgctggcgc tagtgttgca gcgcaagccg cagctgctgc aggtgaccaa ccgttttatc tttaacctcc tcgtcaccga cctgctgcag atttcgctcg tggccccctg ggtggtggcc acctctgtgc ctctcttctg gcccctcaac agccacttct gcacggccct ggttagcctc acccacctgt tcgccttcgc cagcgtcaac accattgtcg tggtgtcagt ggatcgctac ttgtccatca tccaccctct ctcctacccg tccaagatga cccagcgccg cggttacctg ctcctctatg gcacctggat tgtggccatc ctgcagagca ctcctccact ctacggctgg ggccaggctg cctttgatga gcgcaatgct ctctgctcca tgatctgggg ggccagcccc agctacacta ttctcagcgt ggtgtccttc atcgtcattc cactgattgt catgattgcc tgctactccg tggtgttctg tgcagcccgg aggcagcatg ctctgctgta caatgtcaag agacacagct tggaagtgcg agtcaaggac tgtgtggaga atgaggatga agagggagca gagaagaagg aggagttcca ggatgagagt gagtttcgcc gccagcatga aggtgaggtc aaggccaagg agggcagaat ggaagccaag gacggcagcc tgaaggccaa ggaaggaagc acggggacca gtgagagtag tgtagaggcc aggggcagcg aggaggtcag agagagcagc acggtggcca gcgacggcag catggagggt aaggaaggca gcaccaaagt tgaggagaac agcatgaagg cagacaaggg tcgcacagag gtcaaccagt gcagcattga cttgggtgaa gatgacatgg agtttggtga agacgacatc aatttcagtg aggatgacgt cgaggcagtg aacatcccgg agagcctccc acccagtcgt cgtaacagca acagcaaccc tcctctgccc aggtgctacc agtgcaaagc tgctaaagtg atcttcatca tcatttctc ctatgtgcta tccctggggc cctactgctt tttagcagtc ctggccgtgt gggtggatgt cgaaacccag gtaccccagt gggtgatcac cataatcatc tggcttttct tcctgcagtg ctgcatccac ccctatgtct atggctacat gcacaagacc attaagaagg aaatccagga catgctgaag aagttcttct gcaaggaaaa gcccccgaaa gaagatagcc acccagacct gcccggaaca gagggtggga ctgaaggcaa gattgtccct tcctacgatt ctgctacttt tccttga	A	Homo sapiens

583	190414	G Protein-coupled Receptor GPR101	CAC33098.1	MTSTCTNSTR ESNSSHTCMP LSKMPISLAH GIIRSTVLVI FLAASFVGNI VLALVLQRKP QLLQVTNRFI FNLLVTDLLQ ISLVAPWVVA TSVPLFWPLN SHFCTALVSL THLFAFASVN TIVLVSVDRY LSIIHPLSYP SKMTQRRGYL LLYGTWIVAI LQSTPPLYGW GQAAFDERNA LCSMIWGASP SYTILSVVSF IVIPLIVMIA CYSVVFCAAR RQHALLYNVK RHSLEVRVKD CVENEDEEGA EKKEEFQDES EFRRQHEGEV KAKEGRMEAK DGSLKAKEGS TGTSESSVEA RGSEEVRESS TVASDGSMEG KEGSTKVEEN SMKADKGRTE VNQCSIDLGE DGMEFGEDDI NFSEDDVEAV NIPESLPPSR RNSNSNPPLP RCYQCKAAKV IFIIIFSYVL SLGPYCFLAV LAVWVDVETQ VPQWVITIII WLFFLQCCIH PYVYGYMHKT IKKEIQDMLK KFFCKEKPPK EDSHPDLPGT EGGTEGKIVP SYDSATFP	P	Homo sapiens
584	190418	Inflammation-Related G Protein-Coupled Receptor EX33	NM_020370	taactgtcca ccagaaagga ctgctctttg ggtgagttga acttcttcca ttatagaaag aattgaaggc tgagaaactc agcctctatc atgtggaaca gctctgacgc caacttctcc tgctaccatg agtctgtgct gggctatcgt tatgttgcag ttagctgggg ggtggtggtg gctgtgacag gcaccgtggg caatgtgctc accctactgg ccttggccat ccagcccaag ctccgtaccc gattcaacct gctcatagcc aacctcacac tggctgatct cctctactgc acgctccttc agcccttctc tgtggacacc tacctccacc tgcactggcg caccggtgcc accttctgca gggtatttgg gctcctcctt tttgcctcca attctgtctc catcctgacc ctctgcctca tcgcactggg acgctacctc ctcattgccc accctaagct tttccccaa gttttcagtg ccaaggggat agtgctggca ctggtgagca cctgggttgt gggcgtggcc agctttgctc ccctctggcc tatttatatc ctggtacctg tagtctgcac ctgcagcttt gaccgcatcc gaggccggcc ttacaccacc atcctcatgg gcatctactt tgtgcttggg ctcagcagtg ttggcatctt ctattgcctc atccaccgcc aggtcaaacg agcagcacag gcactggacc aatacaagtt gcgacaggca agcatccact ccaaccatgt ggccaggact gatgaggcca tgcctggtcg tttccaggag ctggacagca ggttagcatc aggaggaccc agtgagggga tttcatctga gccagtcagt gctgccacca cccagaccct ggaagggac tcatcagaag tgggagacca gatcaacagc aagagagcta agcagatggc agagaaaagc cctccagaag catctgccaa agcccagcca attaaaggag ccagaagagc tccggattct tcatcggaat ttgggaaggt gactcgaatg tgttttgctg tgttcctctg ctttgccctg agctacatcc ccttcttgct gctcaacatt ctggatgcca gagtccaggc tccccgggtg gtccacatgc ttgctgccaa cctcacctgg ctcaatggtt gcatcaaccc tgtgctctat gcagccatga accgccaatt ccgccaagca tatggctcca ttttaaaaag agggccccgg agtttccata ggctccatta gaactgtgac cctagtcacc agaattcagg actgtctcct ccaggaccaa agtggccagg taataggaga ataggtgaaa taacacatgt gggcattttc acaacaatct ctccccagcc tcccaaatca agtctctcca tcacttgatc aatgtttcag ccctagactg cccaaggagt attattaatt attaataaat gaattctgtg cttttaaaaa aaaaaaaata aaaaaagaaa aaaaaaaaaa aaaaaaaaaa aaaaaa	A	Homo sapiens
585	190418	Inflammation-Related G Protein-Coupled Receptor EX33	NP_065103.1	MWNSSDANFS CYHESVLGYR YVAVSWGVVV AVTGTVGNVL TLLALAIQPK LRTRFNLLIA NLTLADLLYC TLLQPFSVDT YLHLHWRTGA TFCRVFGLLL FASNSVSILT LCLIALGRYL LIAHPKLFPQ VFSAKGIVLA LVSTWVVGVA SFAPLWPIYI LVPVVCTCSF DRIRGRPYTT ILMGIYFVLG LSSVGIFYCL IHRQVKRAAQ ALDQYKLRQA SIHSNHVART DEAMPGRFQE LDSRLASGGP SEGISSEPVS AATTQTLEGD SSEVGDQINS KRAKQMAEKS PPEASAKAQP IKGARRAPDS SSEFGKVTRM CFAVFLCFAL SYIPFLLLNI LDARVQAPRV VHMLAANLTW LNGCINPVLY AAMNRQFRQA YGSILKRGPR SFHRLH	P	Homo sapiens
586	190419	G Protein-Coupled Receptor Ls190419	AJ303165	ctttgcttca gagctaaacc agtttttctt ctctccacag caaatatctt gacagtgatc atcctctccc agctggtggc aagaagacag aagtcctcct acaactatct cttggcactc gctgctgccg acatcttggt cctcttttc atagtgtttg tggacttcct gttggaagat ttcatcttga acatgcagat gcctcaggtc cccgacaaga tcatagaagt gctggaattc tcatccatcc acacctccat atggattact	A	Homo sapiens

				gtaccgttaa ccattgacag gtatatcgct gtctgccacc cgctcaagta ccacacggtc tcatacccag cccgcacccg gaaagtcatt gtaagtgttt acatcacctg cttcctgacc agcatcccct attactggtg gcccaacatc tggactgaag actacatcag cacctctgtg catcacgtcc tcatctggat ccactgcttc accgtctacc tggtgccctg ctccatcttc ttcatcttga actcaatcat tgtgtacaag ctcaggagga agagcaattt tcgtctccgt ggctactcca cggggaagac caccgccatc ttgttcacca ttacctccat ctttgccaca ctttgggccc cccgcatcat catgattctt taccacctct atggggcgcc catccagaac cgctggctgg tgcacatcat gtccgacatt gccaacatgc tagcccttct gaacacagcc atcaacttct tcctctactg cttcatcagc aagcggttcc gcacc		
587	190419	G Protein-Coupled Receptor Ls190419	CAC33085.1	LCFRAKPVFL LSTANILTVI ILSQLVARRQ KSSYNYLLAL AAADILVLFF IVFVDFLLED FILNMQMPQV PDKIIEVLEF SSIHTSIWIT VPLTIDRYIA VCHPLKYHTV SYPARTRKVI VSVYITCFLT SIPYYWWPNI WTEDYISTSV HHVLIWIHCF TVYLVPCSIF FILNSIIVYK LRRKSNFRLR GYSTGKTTAI LFTITSIFAT LWAPRIIMIL YHLYGAPIQN RWLVHIMSDI ANMLALLNTA INFFLYCFIS KRFRT	P	Homo sapiens
588	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NM_020377	aagttctcta agtttgaagc gtcagcttca accaaacaaa ttaatggcta ttctacattc aaaaatcagg aaatttaaat ttattatgaa atgtaatgca gcatgtagta aagacttaac cagtgtttta aaactcaact ttcaaagaaa agatagtatt gctccctgtt tcattaaaac ctagagagat gtaatcagta agcaagaagg aaaaagggaa attcacaaag taactttttg tgtctgtttc tttttaaccc agcatggaga gaaaatttat gtccttgcaa ccatccatct ccgtatcaga aatggaacca aatggcacct tcagcaataa caacagcagg aactgcacaa ttgaaaactt caagagagaa tttttcccaa ttgtatatct gataatattt ttctggggag tcttgggaaa tgggttgtcc atatatgttt tcctgcagcc ttataagaag tccacatctg tgaacgtttt catgctaaat ctggccattt cagatctcct gttcataagc acgcttccct tcagggctga ctattatctt agaggctcca attggatatt tggagacctg gcctgcagga ttatgtctta ttccttgtat gtcaacatgt acagcagtat ttatttcctg accgtgctga gtgttgtgcg tttcctggca atggttcacc cctttcggct tctgcatgtc accagcatca ggagtgcctg gatcctctgt gggatcatat ggatccttat catggcttcc tcaataatgc tcctggacag tggctctgag cagaacggca gtgtcacatc atgcttagag ctgaatctct ataaaattgc taagctgcag accatgaact atattgcctt ggtggtgggc tgcctgctgc catttttcac actcagcatc tgttatctgc tgatcattcg ggttctgtta aaagtggagg tcccagaatc ggggctgcgg gtttctcaca ggaaggcact gaccaccatc atcatcacct tgatcatctt cttcttgtgt ttcctgccct atcacacact gaggaccgtc cacttgacga catggaaagt gggtttatgc aaagacagac tgcataaagc tttggttatc acactggcct tggcagcagc caatgcctgc ttcaatcctc tgctctatta ctttgctggg gagaatttta aggacagact aaagtctgca ctcagaaaag gccatccaca gaaggcaaag acaaagtgtg ttttccctgt tagtgtgtgg ttgagaaagg aaacaagagt ataaggagct cttagatgag acctgttctt gtatccttgt gtccatcttc attcactcat agtctccaaa tgactttgta tttacatcac tcccaacaaa tgttgattct taatatttag ttgaccatta cttttgttaa taagacctac ttcaaaaatt ttattcagtg tattttcagt tgttgagtct taatgaggga tacaggagga aaaatcccta ctagagtcct gtgggctgaa atatcagact gggaaaaaat gcaaagcaca ttggatccta cttttcttca gatattgaac cagatctctg gcccatcagg ctttctaaat tcttcaaaag agccacaact tccccagctt ctccagctcc cctgtcctct tcaatccctt gagatatagc aactaacgac gctactggaa gccccagagc agaaaagaag cacatcctaa gattcaggga aagactaact gtgaaaagga aggctgtcct ataacaaagc agcatcaagt cccaagtaag gacagtgaga gaaaaggggg agaaggattg gagcaaaaga gaactggcaa taagtagggg aaggaagaat ttcattttgc attgggagag aggttctaac acactgaagg caaccctatt tctactgttt ctctcttgcc agggtattag gaaggacagg aaaagtagga ggaggatctg gggcattgcc ctaggaaatg aaagaattgt gtatagaatg gaagggggat catcaaggac atgtatctca aattttcttt gagatgcagg ttagttgacc ttgctgcagt tctccttccc attaattcat tgggatggaa gccaaaaata aaagaggtgc ctctgaggat tagggttgag cactcaaggg aaagatggag tagagggcaa atagcaaaag ttgttgcact cctgaaattc tattaacatt tccgcagaag atgagtaggg agatgctgcc ttccctttttg agatagtgta gaaaaacact agatagtgtg agaggttcct ttctgtccat tgaaacaagg ctaaggatac taccaactac tatcaccatg accattgtac tgacaacaat tgaatgcagt	A	Homo sapiens

				ctccctgcag ggcagattat gccaggcact ttacatttgt tgatcccatt tgacattcac accaaagctc tgagttccat tttacagctg aagaaattga agcttagaga aattaagaag cttgtttaag tttacacagc tagtaagagt tttaaaaatc tctgtgcaga agtgttggct gggtgctctc cccaccacta cccttgtaaa cttccaggaa gattggttga aagtctgaat aaaagctgtc ctttcctacc aatttcctcc ccctcctcac tctcacaaga aaaccaaaag tttctcttca gagttgttga ctcatagtac agtaaagggt ggaggtgata tggcattctg aaagtaggga gggactaagt cagtcgtcat actaaac		
589	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	MERKFMSLQP SISVSEMEPN GTFSNNNSRN CTIENFKREF FPIVYLIIFF WGVLGNGLSI YVFLQPYKKS TSVNVFMLNL AISDLLFIST LPFRADYYLR GSNWIFGDLA CRIMSYSLYV NMYSSIYFLT VLSVVRFLAM VHPFRLLHVT SIRSAWILCG IIWILIMASS IMLLDSGSEQ NGSVTSCLEL NLYKIAKLQT MNYIALVVGC LLPFFTLSIC YLLIIRVLLK VEVPESGLRV SHRKALTTII ITLIIFFLCF LPYHTLRTVH LTTWKVGLCK DRLHKALVIT LALAAANACF NPLLYYFAGE NFKDRLKSAL RKGHPQKAKT KCVFPVSVWL RKETRV	P	Homo sapiens
590	190437	G Protein-Coupled Receptor C5L2	NM_018485	cctgtgtgcc acgtgctgga caaatcttaa ctcctcaagg actcccaaaa ccagagacac caggagcctg aatggggaac gattctgtca gctacgagta tggggattac agcgacctct cggaccgccc tgtggactgc ctggatggcg cctgcctggc catcgacccg ctgcgcgtgg ccccgctccc actgtatgcc gccatcttcc tggtgggggt gccgggcaat gccatggtgg cctgggtggc tgggaaggtg gcccgccgga gggtgggtgc cacctggttg ctccacctgg ccgtggcgga tttgctgtgc tgtttgtctc tgcccatcct ggcagtgccc attgcccgtg gaggccactg gccgtatggt gcagtgggct gtcgggcgct gccctccatc atcctgctga ccatgtatgc cagcgtcctg ctcctggcag ctctcagtgc cgacctctgc ttcctggctc tcgggcctgc ctggtggtct acggttcagc gggcgtgcgg ggtgcaggtg gcctgtgggg cagcctggac actggccttg ctgctcaccg tgccctccgc catctaccgc cggctgcacc aggagcactt cccagcccgg ctgcagtgtg tggtggacta cggcggctcc tccagcaccg agaatgcggt gactgccatc cggtttcttt ttggcttcct ggggcccctg gtggccgtgg ccagctgcca cagtgccctc ctgtgctggg cagcccgacg ctgccggccg ctgggcacag ccattgtggt ggggtttttt gtctgctggg caccctacca cctgctgggg ctggtgctca ctgtggcggc cccgaactcc gcactcctgg ccagggccct gcgggctgaa cccctcatcg tgggccttgc cctcgctcac agctgcctca atcccatgct cttcctgtat tttgggaggg ctcaactccg ccggtcactg ccagctgcct gtcactgggc cctgagggag tcccagggcc aggacgaaag tgtggacagc aagaaatcca ccagccatga cctggtctcg gagatggagg tgtaggctgg agagacattg tgggtgtgta tcttcttatc tcatttcaca agactggctt caggcatagc tggatccagg agctcaatga tgtcttcatt ttattccttc cttcattcaa cagatatcca tcatgcactt gctatgtgca aggccttttt aggcactaga gatatagcag tgaccaaaac agacacaaat cctgccc	A	Homo sapiens
591	190437	G Protein-Coupled Receptor C5L2	NP_060955.1	MGNDSVSYEY GDYSDLSDRP VDCLDGACLA IDPLRVAPLP LYAAIFLVGV PGNAMVAWVA GKVARRRVGA TWLLHLAVAD LLCCLSLPIL AVPIARGGHW PYGAVGCRAL PSIILLTMYA SVLLLAALSA DLCFLALGPA WWSTVQRACG VQVACGAAWT LALLLTVPSA IYRRLHQEHF PARLQCVVDY GGSSSTENAV TAIRFLFGFL GPLVAVASCH SALLCWAARR CRPLGTAIVV GFFVCWAPYH LLGLVLTVAA PNSALLARAL RAEPLIVGLA LAHSCLNPML FLYFGRAQLR RSLPAACHWA LRESQGQDES VDSKKSTSHD LVSEMEV	P	Homo sapiens
592	190438	G Protein-Coupled Receptor Ls190438	LG94114	atgctgggcc ctgctgtcct gggcctcagc ctctgggctc tcctgcaccc tgggacgggg gccccattgt gcctgtcaca gcaacttagg atgaaggggg actacgtgct ggggggggctg ttccccctgg gcgaggccga ggaggctggc ctccgcagcc ggacacggcc cagcagccct gtgtgcacca ggtacagagg tgggacggcc tgggtcgggg tcagggtgac caggtctggg gtgctcctga gctggggccg aggtggccat ctgcggttct gtgtggcccc aggttctcct caaacggcct gctctgggca ctggccatga aaatggccgt ggaggagatc aacaacaagt cggatctgct gcccgggctg cgcctgggct acgacctctt tgatacgtgc tcggagcctg tggtggccat gaagcccagc ctcatgttcc tggccaaggc aggcagccgc gacatcgccg	A	Homo sapiens

				cctactgcaa ctacacgcag taccagcccc gtgtgctggc tgtcatcggg ccccactcgt cagagctcgc catggtcacc ggcaagttct tcagcttctt cctcatgccc caggtggcgc cccccaccat cacccacccc cacccagccc tgcccgtggg agcccctgtg tcaggagatg cctcttggcc cttgcaggtc agctacggtg ctagcatgga gctgctgagc gcccgggaga ccttcccctc cttcttccgc accgtgccca gcgaccgtgt gcagctgacg gccgccgcgg agctgctgca ggagttcggc tggaactggg tggccgccct gggcagcgac gacgagtacg gccggcaggg cctgagcatc ttctcggccc tggctcggca cgcggcatct gcatcgcgca cgagggcctg gtgccgctgc cccgtgccga tgactcgcgg ctggggaagg tgcaggacgt cctgcaccag gtgaaccaga gcagcgtgca ggtggtgctg ctgttcgcct ccgtgcacgc cgcccacgcc ctcttcaact acagcatcag cagcaggctc tcgcccaagg tgtgggtggc cagcgaggcc tggctgacct ctgacctggt catggggctg cccggcatgg cccagatggg cacggtgctt ggcttcctcc agagggggtgc ccagctgcac gagttccccc agtacgtgaa gacgcacctg gccctggcca ccgacccggc cttctgctct gccctgggcg agagggagca gggtctggag gaggacgtgg tgggccagcg ctgcccgcag tgtgactgca tcacgctgca gaacgtgagc gcagggctaa atcaccacca gacgttctct gtctacgcag ctgtgtatag cgtgcccagg ccctgcacaa cactcttcag tgcaacgcct caggctgccc cgcgcaggac cccgtgaagc cctggcaggt gagcccggga gatgggggtg tgctgtcctc tgcatgtgcc caggccacca ggcacggcca ccacgcctga gctggaggtg gctggcggct cagccccgtc ccccgcccgc agctcctgga gaacatgtac aacctgacct tccacgtggg cgggctgccg ctgcggttcg acagcagcgg aaacgtggac atggagtacg acctgaagct gtgggtgtgg cagggctcag tgcccaggct ccacgacgtg ggcaggttca acggcagcct caggacagag cgcctgaaga tccgctggca cacgtctgac aaccaggtga ggtgagggtg ggtgtgccag gcgtgcccgt ggtagccccc gcggcagggc gcagcctggg ggtgggggcc gttccagtct cccgtggcat gcccagccga gcagagccag accccaggcc tgtgcgcaga agcccgtgtc ccggtgctcg cggcagtgcc aggagggcca ggtgcgccgg gtcaaggggt tccactcctg ctgctacgac tgtgtggact gcgaggcggg cagctaccgg caaaacccag gtgagccgcc ttcccggcag gcgggggtgg gaacgcagca ggggagggtc ctgccaagtc ctgactctga gaccagagcc cacaggggac aagacgaaca cccagcgccc ttctcctctc tcacagacga catcgcctgc accttttgtg gccaggatga gtggtccccg gagcgaagca cacgctgctt ccgccgcagg tctcggttcc tggcatgggg cgagccggct gtgctgctgc tgctcctgct gctgagcctg gcgctgggcc ttgtgctggc tgctttgggg ctgttcgttc accatcggga cagcccactg gttcaggcct cggggggggcc cctggcctgc tttggcctgg tgtgcctggg cctggtctgc ctcagcgtcc tcctgttccc tggccagccc agccctgccc gatgcctggc ccagcagccc ttgtcccacc tcccgctcac gggctgcctg agcacactct tcctgcaggc ggccgagatc ttcgtggagt cagaactgcc tctgagctgg gcagaccggc tgagtggctg cctgcggggg ccctgggcct ggctggtggt gctgctggcc atgctggtgg aggtcgcact gtgcacctgg tacctggtgg ccttcccgcc ggaggtggtg acggactggc acatgctgcc cacggaggcg ctggtgcact gccgcacacg ctcctgggtc agcttcggcc tagcgcacgc caccaatgcc acgctggcct ttctctgctt cctgggcact ttcctggtgc ggagccagcc gggccgctac aaccgtgccc gtggcctcac ctttgccatg ctggcctact tcatcacctg ggtctccttt gtgcccctcc tggccaatgt gcaggtggtc ctcaggcccg ccgtgcagat gggcgccctc ctgctctgtg tcctgggcat cctggctgcc ttccacctgc ccaggtgtta cctgctcatg cggcagccag ggctcaacac ccccgagttc ttcctgggag ggggccctgg ggatgcccaa ggccagaatg acgggaacac aggaaatcag gggaaacatg agtga		
593	190438	G Protein-Coupled Receptor Ls190438	ENSP00000080322	FSSNGLLWAL AMKMAVEEIN NKSDLLPGLR LGYDLFDTCS EPVVAMKPSL MFLAKAGSRD IAAYCNYTQY QPRVLAVIGP HSSELAMVTG KFFSFFLMPQ VSYGASMELL SARETFPSFF RTVPSDRVQL TAAAELLQEF GWNWVAALGS DDEYGRQGLS IFSALAARGI CIAHEGLVPL PRADDSRLGK VQDVLHQVNQ SSVQVVLLFA SVHAAHALFN YSISSRLSPK VWVASEAWLT SDLVMGLPGM AQMGTVLGFL QRGAQLHEFP QYVKTHLALA TDPAFCSALG EREQGLEEDV VGQRCPQCDC ITLQNVSAGL NHHQTFSVYA AVYSVQALHN TLQCNASGCP	P	Homo sapiens

				AQDPVKPWQL LENMYNLTFH VGGLPLRFDS SGNVDMEYDL KLWVWQGSVP RLHDVGRFNG SLRTERLKIR WHTSDNQVRP QACAQKPVSR CSRQCQEGQV RRVKGFHSCC YDCVDCEAGS YRQNPDDIAC TFCGQDEWSP ERSTRCFRRR SRFLAWGEPA VLLLLLLLSL ALGLVLAALG LFVHHRDSPL VQASGGPLAC FGLVCLGLVC LSVLLFPGQP SPARCLAQQP LSHLPLTGCL STLFLQAAEI FVESELPLSW ADRLSGCLRG PWAWLVVLLA MLVEVALCTW YLVAFPPEVV TDWHMLPTEA LVHCRTRSWV SFGLAHATNA TLAFLCFLGT FLVRSQPGRY NRARGLTFAM LAYFITWVSF VPLLANVQVV LRPAVQMGAL LLCVLGILAA FHLPRCYLLM RQPGLNTPEF F		
594	190484	G Protein-Coupled Receptor Ls190484	LG95579	tctgactggc tggttcctct gtctgccctg ggctctttca ctgctctggt gggcctgcgt gttcctggac cctcacgtgg ggcctgcgcc cggggccgcc tctggcgggg tgctgctggg gctttctcct tcagaggcag gaggtgtggc tgggtcctca agggcccctg gggtaggatg cgaggatggg gttggggaag cttcatcaca gggactgggc acagaactgg cagcaggtgc aggggtctgg acgttagtgt ctgcctgtgg ctgggccaca gaatctgact gtggctgggc catgaggttc agctgtggct gggctgtggg atccgactgt ggctgggccg tagggttcag ctgtggctga gctgtgggat ccgatcgtgg ctggagtgtg gggttcacct gaggctgggc cacaggatcc atctgtgact gggcctctgc catcggctct ggcagagttg gaccctcaga atctagctgg gtctgtggct cagtgggcgt gaagctgccc ggccgctcct cgcagagagc tgccgcgaag gacgagagca cggagcgcag cagggtccgg aggtcggcac tggccatgag gcagaggaag gggctgaggc agctgttgag taggatcagg tagtcggagt agaccagggc ctcccagagc aggtagccag agtagacgtc ccacaggaag gccaggtaga gcagctgggc cagctggtag ggcagcctca ggaccacata ggctgacaga atggtcctgg ccacacgggc gaagccccgg caggctgcgg gctgctgttg gcggtggcag gtgcgacagg ctgtggcctg ggtgagcacg tggcagacga gcagcaggag gaaaggcagg aagcccccca ggacctccag catcctcagc gacagctcct cgctgtccca gaagtccagg cagatgacca ggtcgtacca ccagacggca gcctcgggga agaccagcca gggcacgctg aagagtgtgg ccagcaccca gacaccggcg cagacccaga ggggcaggcg gactgggcgg tgcccagggt accagtgtgg gcacagcgcc agcaggcagc ggtcgaggct gagggcggcc agcaggaaga ggccggagga gtaggacacg ccccatagga agtagtagaa gcggcaggca gctgtcccca gcggccagtg tccccccatgc cggatctcta ggatctggaa ggccgctgct gccaggaaca agaagtcaga gagggccagg ctgagcagga gcagcgccag acgcgtgcca gctccatgcc gggcctggga gccggccagc cacgccatca acccattggc tggcagccca aggagcagca gggccaccag gaagaccgtg tcccagccac cttgggggta ggagtcctca tcatcaagct ctgtgcgggg cctgtggcca gtggcaccca ggtcagcttc catggtagtg tccatttggg gtccccagag tcctgctgga cacggagtgg gtgcctggtg aatcaatgat ggtgtgaatg accgagtatg ggagagacgg tgctgtgcat ctccaggcaa gtcaccatcc ctccctgcgc cattgtcatc accttttgag taattatcct atgccaagga cttgaagtgg atgacctcat ggagtcctca tacaatctac tttacag	A	Homo sapiens
595	190484	G Protein-Coupled Receptor Ls190484	ENSMPRT261943	MEADLGATGH RPRTELDDED SYPQGGWDTV FLVALLLLGL PANGLMAWLA GSQARHGAGT RLALLLLSLA LSDFLFLAAA AFQILEIRHG GHWPLGTAAC RFYYFLWGVS YSSGLFLLAA LSLDRCLLAL CPHWYPGHRP VRLPLWVCAG VWVLATLFSV PWLVFPEAAV WWYDLVICLD FWDSEELSLR MLEVLGGFLP FLLLLVCHVL TQATACRTCH RQQQPAACRG FARVARTILS AYVVLRLPYQ LAQLLYLAFL WDVYSGYLLW EALVYSDYLI LLNSCLSPFL CLMASADLRT LLRSVLSSFA AALCEERPGS FTPTEPQTQL DSEGPTLPEP MAEAQSQMDP VAQPQVNPTL QPRSDPTAQP QLNPTAQPQS DPTAQPQLNL MAQPQSDSVA QPQADTNVQT PAPAASSVPS PCDEASPTPS SHPTPGALED PATPPASEGE SPSSTPPEAA PGAGP	P	Homo sapiens

596	190595	G Protein-Coupled Receptor SH120	NM_016334	agcacctggg aaaaggcaga ccgtgtgagg gggcctgtgg ccccagcgtg ctgtggcctc ggggagtggg aagtggaggc aggagccttc cttacacttc gccatgagtt tcctgatcga ctccagcatc atgattacct cccaaatact atttttgga tttgggtggc ttttcttcat gcgccaattg tttaaagact atgagatacg tcagtatgtt gtacaggtga tcttctccgt gacgtttgca ttttcttgca ccatgtttga gctcatcatc tttgaaatct taggagtatt gaatagcagc tcccgttatt ttcactggaa aatgaacctg tgcgtaattc tgctgatcct ggtttcatg gtgccttttt acattggcta ttttattgtg agcaatatcc gactactgca taaacaacga ctgcttttt cctgtctctt atggctgacc tttatgtatt tcttctggaa actaggagat ccctttccca ttctcagccc aaaacatggg atcttatcca tagaacagct catcagccgg gttggtgtga ttggagtgac tctcatggct cttctttctg gatttggtgc tgtcaactgc ccatacactt acatgtctta cttcctcagg aatgtgactg acacagatat tctagccctg gaacggcgac tgctgcaaac catggatatg atcataagca aaaagaaaag gatggcaatg gcacggagaa caatgttcca gaagggggaa gtgcataaca aaccatcagg tttctgggga atgataaaaa gtgttaccac ttcagcatca ggaagtgaaa atcttactct tattcaacag gaagtggatg ctttggaaga attaagcagg cagcttttc tggaaacagc tgatctatat gctaccaagg agagaataga atactccaaa accttcaagg ggaaatattt taattttctt ggttactttt tctctattta ctgtgtttgg aaaattttca tggctaccat caatattgtt tttgatcgag ttgggaaaac ggatcctgtc acaagaggca ttgagatcac tgtgaattat ctgggaatcc aatttgatgt gaagttttgg tcccaacaca tttccttcat tcttgttgga ataatcatcg tcacatccat cagaggattg ctgatcactc ttaccaagtt cttttatgcc atctctagca gtaagtcctc caatgtcatt gtcctgctat tagcacagat aatgggcatg tactttgtct cctctgtgct gctgatccga atgagtatgc ctttagaata ccgcaccata atcactgaag tccttggaga actgcagttc aacttctatc accgttggtt tgatgtgatc ttcctggtca gcgctctctc tagcatactc ttcctctatt tggctcacaa acaggcacca gagaagcaaa tggcaccttg aacttaagcc tactacagac tgttagaggc cagtggtttc aaaatttaga tataagaggg gggaaaaatg gaaccagggc ctgacatttt ataaacaaac aaaatgctat ggtagcattt ttcaccttca tagcatactc cttcccctc aggtgatact atgaccatga gtagcatcag ccagaacatg agagggagaa ctaactcaag acaatactca gcagagagca tcccgtgtgg atatgaggct ggtgtagagg cggagaggag ccaagaaact aaaggtgaaa aatacactgg aactctgggg caagacatgt ctatggtagc tgagccaaac acgtaggatt tccgttttaa ggttcacatg gaaaaggtta tagctttgcc ttgagattga ctcattaaaa tcagagactg t	A	Homo sapiens
597	190595	G Protein-Coupled Receptor SH120	NP_057418.1	MSFLIDSSIM ITSQILFFGF GWLFFMRQLF KDYEIRQYVV QVIFSVTFAF SCTMFELIIF EILGVLNSSS RYFHWKMNLC VILLILVFMV PFYIGYFIVS NIRLLHKQRL LFSCLLWLTF MYFFWKLGDP FPILSPKHGI LSIEQLISRV GVIGVTLMAL LSGFGAVNCP YTYMSYFLRN VTDTDILALE RRLLQTMDMI ISKKKRMAMA RRTMFQKGEV HNKPSGFWGM IKSVTTSASG SENLTLIQQE VDALEELSRQ LFLETADLYA TKERIEYSKT FKGKYFNFLG YFFSIYCVWK IFMATINIVF DRVGKTDPVT RGIEITVNYL GIQFDVKFWS QHISFILVGI IIVTSIRGLL ITLTKFFYAI SSSKSSNVIV LLLAQIMGMY FVSSVLLIRM SMPLEYRTII TEVLGELQFN FYHRWFDVIF LVSALSSILF LYLAHKQAPE KQMAP	P	Homo sapiens
598	190599	G Protein-Coupled Receptor GPRC5B	NM_016235	aggtcgcagg cgggcgtgcg tggagcgggg gccgcggccg cgccgcagag atgtgactcg ggccgaaggc cagctggagc gtcggcgctg cggggccgcg ggggtcgaat gttcgtggca tcagagagaa agatgagagc tcaccaggtg ctcaccttcc tcctgctctt cgtgatcacc tcggtggcct ctgaaaacgc cagcacatcc cgaggctgtg ggctggacct cctccctcag tacgtgtccc tgtgcgacct ggacgccatc tggggcattg tggtggaggc ggtggccggg gcgggcgccc tgatcacact gctcctgatg ctcatcctcc tggtgcggct gcccttcatc aaggagaagg agaagaagag ccctgtgggc ctccactttc tgttcctcct ggggaccctg ggcctctttg ggctgacgtt tgccttcatc atccaggagg acgagaccat ctgctctgtc cgccgcttcc tctggggcgt cctctttgcg ctctgcttct cctgcctgct gagccaggca tggcgcgtgc ggaggctggt gcggcatggc acgggccccg cgggctggca gctggtgggc ctggcgctgt gcctgatgct ggtgcaagtc atcatcgctg tggagtggct ggtgctcacc gtgctgcgtg acacaaggcc agcctgcgcc tacgagccca tggactttgt gatggccctc	A	Homo sapiens

				atctacgaca tggtactgct tgtggtcacc ctggggctgg ccctcttcac tctgtgcggc aagttcaaga ggtggaagct gaacggggcc ttcctcctca tcacagcctt cctctctgtg ctcatctggg tggcctggat gaccatgtac ctcttcggca atgtcaagct gcagcagggg gatgcctgga acgaccccac cttggccatc acgctggcgg ccagcggctg ggtcttcgtc atcttccacg ccatccctga gatccactgc acccttctgc cagccctgca ggagaacacg cccaactact tcgacacgtc gcagcccagg atgcgggaga cggccttcga ggaggacgtg cagctgccgc gggcctatat ggagaacaag gccttctcca tggatgaaca caatgcagct ctccgaacag caggatttcc caacggcagc ttgggaaaaa gacccagtgg cagcttgggg aaaagaccca gcgctccgtt tagaagcaac gtgtatcagc caactgagat ggccgtcgtg ctcaacggtg ggaccatccc aactgctccg ccaagtcaca caggaagaca cctttggtga aagactttaa gttccagaga atcagaattt ctcttaccga tttgcctccc tggctgtgtc tttcttgagg gagaaatcgg taacagttgc cgaaccaggc cgcctcacag ccaggaaatt tggaaatcct agccaagggg atttcgtgta aatgtgaaca ctgacgaact gaaaagctaa caccgactgc ccgcccctcc cctgccacac acacagacac gtaataccag accaacctca atccccgcaa actaaagcaa agctaattgc aaatagtatt aggctcactg gaaaatgtgg ctgggaagac tgtttcatcc tctgggggta gaacagaacc aaattcacag ctggtgggcc agactggtgt tggttggagg tggggggctc ccactcttat cacctctccc cagcaagtgc tggaccccag gtagcctctt ggagatgacc gttgcgttga ggacaaatgg ggactttgcc accggcttgc ctggtggttt gcacatttca ggggggtcag gagagttaag gaggttgtgg gtgggattcc aaggtgaggc ccaactgaat cgtggggtga gctttatagc cagtagaggt ggagggaccc tggcatgtgc caaagaagag gccctctggg tgatgaagtg accatcacat ttggaaagtg atcaaccact gttccttcta tggggctctt gctctaatgt ctatggtgag aacacaggcc ccgccccttc ccttgtagag ccatagaaat attctggctt ggggcagcag tcccttcttc ccttgatcat ctcgccctgt tcctacactt acgggtgtat ctccaaatcc tctcccaatt ttattccctt attcatttca agagctccaa tggggtctcc agctgaaagc cctccggga ggcaggttgg aaggcaggca ccacggcagg ttttccgcga tgatgtcacc tagcagggct tcagggggttc ccactaggat gcagagatga cctctcgctg cctcacaagc agtgacacct cgggtccttt ccgttgctat ggtgaaaatt cctggatgga atggatcaca tgagggtttc ttgttgcttt tggagggtgt gggggatatt ttgttttggt ttttctgcag gttccatgaa aacagccctt ttccaagccc attgtttctg tcatggtttc catctgtcct gagcaagtca ttcctttgtt atttagcatt tcgaacatct cggccattca aagcccccat gttctctgca ctgtttggcc agcataacct ctagcatcga ttcaaagcag agttttaacc tgacggcatg gaatgtataa atgagggtgg gtccttctgc agatactcta atcactacat tgctttttct ataaaactac ccataagcct ttaaccttta aagaaaaatg aaaaaggtta gtgtttgggg gccgggggag gactgaccgc ttcataagcc agtacgtctg agctgagtat gtttcaataa accttttgat atttctcaaa aaaaaaaaaa aaaaaaaaaa		
599	190599	G Protein-Coupled Receptor GPRC5B	NP_057319.1	MFVASERKMR AHQVLTFLLL FVITSVASEN ASTSRGCGLD LLPQYVSLCD LDAIWGIVVE AVAGAGALIT LLLMLILLVR LPFIKEKEKK SPVGLHFLFL LGTLGLFGLT FAFIIQEDET ICSVRRFLWG VLFALCFSCL LSQAWRVRRL VRHGTGPAGW QLVGLALCLM LVQVIIAVEW LVLTVLRDTR PACAYEPMDF VMALIYDMVL LVVTLGLALF TLCGKFKRWK LNGAFLLITA FLSVLIWVAW MTMYLFGNVK LQQGDAWNDP TLAITLAASG WVFVIFHAIP EIHCTLLPAL QENTPNYFDT SQPRMRETAF EEDVQLPRAY MENKAFSMDE HNAALRTAGF PNGSLGKRPS GSLGKRPSAP FRSNVYQPTE MAVVLNGGTI PTAPPSHTGR HLW	P	Homo sapiens
600	190602	G Protein-Coupled Receptor GPCR150	NM_014373	gtggcctcga ggtggtggca gggccgcccc ctgcagtccg gagacgaacg cacggaccgg gcctccggag gcaggttcgg ctggaaggaa ccgctctcgc ttcgtcctac acttgcgcaa atgtctccga gcttactcac atagcatatt ggtatatcaa aatgaaatgc aaggaaccaa aaataacata attgaaggca gtaaaagtga aattaaatag gaagatcatc agtcaaggaa gacccactgg agaggacaga aaatgaagca gtgttttatc atgtgtattt cagcaggtct tcttgaaatt taactaaaaa tatgactgct ctctcttcag agaactgctc ttttcagtac cagttacgtc aaacaaacca gcccctagac gttaactatc tgctattctt gatcatactt gggaaaatat tattaaatat ccttacacta ggaatgagaa gaaaaaacac ctgtcaaaat tttatggaat atttttgcat ttcactagca ttcgttgatc	A	Homo sapiens

				ttttactttt ggtaaacatt tccattatat tgtatttcag ggattttgta cttttaagca ttaggttcac taaataccac atctgcctat ttactcaaat tatttccttt acttatggct ttttgcatta tccagttttc ctgacagctt gtatagatta ttgcctgaat ttctctaaaa caaccaagct ttcatttaag tgtcaaaaat tattttattt ctttacagta attttaattt ggatttcagt ccttgcttat gttttgggag acccagccat ctaccaaagc ctgaaggcac agaatgctta ttctcgtcac tgtcctttct atgtcagcat tcagagttac tggctgtcat ttttcatggt gatgatttta tttgtagctt tcataacctg ttgggaagaa gttactactt tggtacaggc tatcaggata acttcctata tgaatgaaac tatcttatat tttccttttt catcccactc cagttatact gtgagatcta aaaaaatatt cttatccaag ctcattgtct gttttctcag tacctggtta ccatttgtac tacttcaggt aatcattgtt ttacttaaag ttcagattcc agcatatatt gagatgaata ttccctggtt atactttgtc aatagttttc tcattgctac agtgtattgg tttaattgtc acaagcttaa tttaaaagac attggattac ctttggatcc atttgtcaac tggaagtgct gcttcattcc acttacaatt cctaatcttg agcaaattga aaagcctata tcaataatga tttgttaata ttattaatta aaagttacag ctgtcataag atcataattt tatgaacaga aagaactcag gacatattaa aaaataaact gaactaaaac aacttttgcc ccctgactga tagcatttca gaatgtgtct tttgaagggc tataccagtt attaaatagt gttttatttt aaaaacaaaa taattccaag aagtttttat agttattcag ggacactata ttacaaatat tactttgtta ttaacacaaa aagtgataag agttaacatt tggctatact gatgtttgtg ttactcaaaa aaactactgg atgcaaactg ttatgtaaat ctgagatttc actgacaact ttaagatatc aacctaaaca tttttattaa atgttcaaat gtaagcaaga aaaaaaaaa		
601	190602	G Protein-Coupled Receptor GPCR150	NP_055188.1	MTALSSENCS FQYQLRQTNQ PLDVNYLLFL IILGKILLNI LTLGMRRKNT CQNFMEYFCI SLAFVDLLLL VNISIILYFR DFVLLSIRFT KYHICLFTQI ISFTYGFLHY PVFLTACIDY CLNFSKTTKL SFKCQKLFYF FTVILIWISV LAYVLGDPAI YQSLKAQNAY SRHCPFYVSI QSYWLSFFMV MILFVAFITC WEEVTTLVQA IRITSYMNET ILYFPFSSHS SYTVRSKKIF LSKLIVCFLS TWLPFVLLQV IIVLLKVQIP AYIEMNIPWL YFVNSFLIAT VYWFNCHKLN LKDIGLPLDP FVNWKCCFIP LTIPNLEQIE KPISIMIC	P	Homo sapiens
602	190623	Melanopsin	AF147788	ggttcccacc catcagacca cagcttccag ccaggacagc ttgggcagca gtagtcatag gagacatctg gaggctgagg cttcccacgc ggccctcctg gctccattgg atggcaggct ccgggcagac gagctgccag gtgggtgtgg gatgcaaagg tttggagcaa gagcgccatg gggagcctcc ccagtgggac agaagcacag gagtgagggg gttgggccct gaggagatct cagtgtcacc cgcaacggct gcagtgcacg gcccatggag aaaggacatt gtcaggtgag acgtgggctt ccaaaggccc caggctgggg gttccgagtc ctctgatctt tccctgaggt gctcctttga ggcctgtggc accctgggta tgtggattcc cgcctcatgt gtccacctga caagcacttc tcccctggac tcctgtgcct gctccatcac ctgcaccctc tcttaattag caggttggag agtggggtcc acattgaatg ggacgttgtg ttgactcaga attgctccca gctgtgagga attgttaaac ccctacatta aaacgcaagc agctggcatt gagcctaggg acagaaagaa aagccggccc ctcagcctca ccctgccccc agggtggcct ctgtgagcca aagccctgaa gtggaagagc ctcaggagga aggcagtctg agccatgggc tggcagctgc aggaagtaca gctcccgctc ccagtgaggc tgctcccact tctcctgctc aaacctgggg ctccaggaga actgtttgta aagactgggg gaacttctgg aagaggagtg atatctctgt ccactccagg gctccaacac tcccagcact gtgccaggac atggccccca cttaggatga ccgctgcccg gtcgggctcc cctaaacgca gcctcttgtg gcaggcctag cccgagcagc cctccctgga agccgtgtgt tcagcttccc ttctctccag ctcctgctgc ctcctctaag acagggcaag gggcaggccc ggggtcccct ccacttctga catccagtca acttggatca ggcctgcagg cctgggtgag ttcctgggac tctcccaata aggttttaaa aaatctttat actttaaaaa tttctgccgg gcccagtggc tcacgcctgt aatcctggca ctttgggaag ccgaggtggg tggatcacct gaggtcagga gttcgagact agcctggcca acatggtgaa ctcctgcctc tgctaaatat acaaaaatta gccaggtgtg gtggcgagtg cctgtaatcc cagctactcg ggaggctgag gcaggagaat tgcttggacc tgggaggcgg aagttgcagt gagctgagat tgcaccattg cactccaggc tgggtgacag agcaagactg tctcaaaaaa aataaaaata aaaaaataaa actttcttat caaaaaacaa gcaaaagccg cctcgtgatc tgatctcacc ctactgctac atcctccttg tgtctccatc tgtgaaaggg	A	Homo sapiens

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603	190623	Melanopsin	AAF24978.1	MNPPSGPRVP PSPTQEPSCM ATPAPPSWWD SSQSSISSLG RLPSISPTAP	P	Homo

				GTWAAAWVPL PTVDVPDHAH YTLGTVILLV GLTGMLGNLT VIYTFCRSRS LRTPANMFII NLAVSDFLMS FTQAPVFFTS SLYKQWLFGE TGCEFYAFCG ALFGISSMIT LTAIALDRYL VITRPLATFG VASKRRAAFV LLGVWLYALA WSLPPFFGWS AYVPEGLLTS CSWDYMSFTP AVRAYTMLLC CFVFFLPLLI IIYCYIFIFR AIRETGRALQ TFGACKGNGE SLWQRQRLQS ECKMAKIMLL VILLFVLSWA PYSAVALVAF AGYAHVLTPY MSSVPAVIAK ASAIHNPIIY AITHPKYRVA IAQHLPCLGV LLGVSRRHSR PYPSYRSTHR STLTSHTSNL SWISIRRRQE SLGSESEVGW THMEAAAVWG AAQQANGRSL YGQGLEDLEA KAPPRPQGHE AETPGKTKGL IPSQDPRM		sapiens
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605	190627	G Protein-Coupled Receptor GPR41 & GPR42	NP_005295.1	MDTGPDQSYF SGNHWFVFSV YLLTFLVGLP LNLLALVVFV GKLQRRPVAV DVLLLNLTAS DLLLLLFLPF RMVEAANGMH WPLPFILCPL SGFIFFTTIY LTALFLAAVS IERFLSVAHP LWYKTRPRLG QAGLVSVACW LLASAHCSVV YVIEFSGDIS HSQGTNGTCY LEFRKDQLAI LLPVRLEMAV VLFVVPLIIT SYCYSRLVWI LGRGGSHRRQ RRVAGLLAAT LLNFLVCFGP YNVSHVVGYI CGESPAWRIY VTLLSTLNSC VDPFVYYFSS SGFQADFHEL LRRLCGLWGQ WQQESSMELK EQKGGEEQRA DRPAERKTSE HSQGCGTGGQ VACAES	P	Homo sapiens
606	190701	C-C Chemokine Receptor 11	NM_016557	caagactgct cctctctgcc gactacaaca gattggagcc atggctttgg agcagaacca gtcaacagat tattattatg aggaaaatga aatgaatggc acttatgact acagtcaata tgaactgatc tgtatcaaag aagatgtcag agaatttgca aaagttttcc tccctgtatt cctcacaata gttttcgtca ttggacttgc aggcaattcc atggtagtgg caatttatgc ctattacaag aaacagagaa ccaaaacaga tgtgtacatc ctgaatttgg ctgtagcaga tttactcctt ctattcactc tgcctttttg ggctgttaat gcagttcatg ggtgggtttt agggaaaata atgtgcaaaa taacttcagc cttgtacaca ctaaactttg tctctggaat gcagtttctg gcttgtatca gcatagacag atatgtggca gtaactaaag tccccagcca atcaggagtg ggaaaaccat gctggatcat ctgtttctgt gtctggatgg ctgccatctt gctgagcata ccccagctgg tttttatac agtaaatgac aatgctaggt gcattcccat tttcccccgc tacctaggaa catcaatgaa agcattgatt caaatgctag agatctgcat tggatttgta gtacccttc ttattatggg ggtgtgctac tttatcacag caaggacact catgaagatg ccaaacatta aaatatctcg acccctaaaa gttctgctca cagtcgttat agttttcatt gtcactcaac tgccttataa cattgtcaag ttctgccgag ccatagacat catctactcc ctgatcacca gctgcaacat gagcaaacgc atggacatcg ccatccaagt cacagaaagc atcgcactct ttcacagctg cctcaaccca atcctttatg	A	Homo sapiens

				tttttatggg agcatctttc aaaaactacg ttatgaaagt ggccaagaaa tatgggtcct ggagaagaca gagacaaagt gtggaggagt ttccttttga ttctgagggt cctacagagc caaccagtac ttttagcatt taaaggtaaa actgctctgc cttttgcttg gatacatatg aatgatgctt tcccctcaaa taaaacatct gcattattct gaaactcaaa tctcagacgc cgtggttgca acttataata aagaatgggt tgggggaagg gggagaaata aaagccaaga agaggaaaca agataataaa tgtacaaaac atgaaaatta aaatgaacaa tataggaaaa taattgtaac aggcataagt gaataacact ctgctgtaac gaagaagagc tttgtggtga taattttgta tcttggttgc agtggtgctt atacaaatct acacaagtga taaaatgaca cagaactata tacacacatt gtaccaattt caatttcctg gttttgacat tatagtataa ttatgtaaga tggaaccatt ggggaaaact gggtgaaggg tacccaggac cactctgtac catctttgta acttcctgtg aatttataat aatttcaaaa taaaacaagt taaaaaaaaa cccactatgc tataagttag gccatctaaa acagattatt aaagaggttc atgttaaaag gcatttataa ttatttttaa ttatctaagt tttaatacaa gaacgatttc cctgcataat tttagtactt gaataagtat gcagcagaac tccaactatc ttttttcctg ttttttttaa atttgtaagt aattttataa aatccacctc ctccaaaaaa gcaataaaaa aaaaacaaac tataaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa		
607	190701	C-C Chemokine Receptor 11	NP_057641.1	MALEQNQSTD YYYEENEMNG TYDYSQYELI CIKEDVREFA KVFLPVFLTI VFVIGLAGNS MVVAIYAYYK KQRTKTDVYI LNLAVADLLL LFTLPFWAVN AVHGWVLGKI MCKITSALYT LNFVSGMQFL ACISIDRYVA VTKVPSQSGV GKPCWIICFC VWMAAILLSI PQLVFYTVND NARCIPIFPR YLGTSMKALI QMLEICIGFV VPFLIMGVCY FITARTLMKM PNIKISRPLK VLLTVVIVFI VTQLPYNIVK FCRAIDIIYS LITSCNMSKR MDIAIQVTES IALFHSCLNP ILYVFMGASF KNYVMKVAKK YGSWRRQRQS VEEFPFDSEG PTEPTSTFSI	P	Homo sapiens
608	190705	G Protein-Coupled Receptor SALPR	NM_016568	gatttgggga gttatgcgcc agtgccccag tgaccgcggg acacggagag gggaagtctg cgttgtacat aaggacctag ggactccgag cttggcctga gaacccttgg acgccgagtg cttgccttac gggctgcact cctcaactct gctccaaagc agccgctgag ctcaactcct gcgtccaggg cgttcgctgc gcgccaggac gcgcttagta cccagttcct gggctctctc ttcagtagct gctttgaaag ctcccacgca cgtcccgcag gctagcctgg caacaaaact ggggtaaacc gtgttatctt aggtcttgtc ccccagaaca tgacctagag gtacctgcgc atgcagatgg ccgatgcagc cacgatagcc accatgaata aggcagcagg cggggacaag ctagcagaac tcttcagtct ggtcccggac cttctggagg cggccaacac gagtggtaac gcgtcgctgc agcttccgga cttgtggtgg gagctggggc tggagttgcc ggacggcgcg ccgccaggac atccccccggg cagcggcggg gcagagagcg cggacacaga ggcccgggtg cggattctca tcagcgtggt gtactgggtg gtgtgcgccc tggggttggc gggcaacctg ctggttctct acctgatgaa gagcatgcag ggctggcgca agtcctctat caacctcttc gtcaccaacc tggcgctgac ggactttcag tttgtgctca ccctgccctt ctgggcggtg gagaacgctc ttgacttcaa atggcccttc ggcaaggcca tgtgtaagat cgtgtccatg gtgacgtcca tgaacatgta cgccagcgtg ttcttcctca ctgccatgag tgtgacgcgc taccattcgg tggcctcggc tctgaagagc caccggaccc gaggacacgg ccggggcgac tgctgcggcc ggagcctggg ggacagctgc tgcttctcgg ccaaggcgct gtgtgtgtgg atctgggctt tggccgcgct ggcctcgctg cccagtgcca ttttctccac cacggtcaag gtgatgggcg aggagctgtg cctggtgcgt ttccccggaca agttgctggg ccgcgacagg cagttctggc tgggcctcta ccactcgcag aaggtgctgt tgggcttcgt gctgccgctg ggcatcatta tcttgtgcta cctgctgctg gtgcgcttca tcgccgaccg ccgcgcggcg gggaccaaag gaggggccgc ggtagccgga ggacgcccga ccggagccag cgcccggaga ctgtcgaagg tcaccaaatc agtgaccatc gttgtcctgt ccttcttcct gtgttggctg cccaaccagg cgctcaccac ctggagcatc ctcatcaagt tcaacgcggt gcccttcagc caggagtatt tcctgtgcca ggtatacgcg ttccctgtga gcgtgtgcct agcgcactcc aacagctgcc tcaacccgt cctctactgc ctcgtgcgcc gcgagttccg caaggcgctc aagagcctgc tgtggcgcat cgcgtctcct tcgatcacca gcatgcgccc cttcaccgcc actaccaagc cggagcacga ggatcagggg ctgcaggccc cggcgccgcc ccacgcggcc	A	Homo sapiens

				gcggagccgg acctgctcta ctacccacct ggcgtcgtgg tctacagcgg ggggcgctac gacctgctgc ccagcagctc tgcctactga cgcaggcctc aggcccaggg cgcgccgtcg gggcaaggtg gccttccccg ggcggtaaag aggtgaaagg atgaaggagg gctgggg		
609	190705	G Protein-Coupled Receptor SALPR	NP_057652.1	MQMADAATIA TMNKAAGGDK LAELFSLVPD LLEAANTSGN ASLQLPDLWW ELGLELPDGA PPGHPPGSGG AESADTEARV RILISVVYWV VCALGLAGNL LVLYLMKSMQ GWRKSSINLF VTNLALTDFQ FVLTLPFWAV ENALDFKWPF GKAMCKIVSM VTSMNMYASV FFLTAMSVTR YHSVASALKS HRTRGHGRGD CCGRSLGDSC CFSAKALCVW IWALAALASL PSAIFSTTVK VMGEELCLVR FPDKLLGRDR QFWLGLYHSQ KVLLGFVLPL GIIILCYLLL VRFIADRRAA GTKGGAAVAG GRPTGASARR LSKVTKSVTI VVLSFFLCWL PNQALTTWSI LIKFNAVPFS QEYFLCQVYA FPVSVCLAHS NSCLNPVLYC LVRREFRKAL KSLLWRIASP SITSMRPFTA TTKPEHEDQG LQAPAPPHAA AEPDLLYYPP GVVVYSGGRY DLLPSSSAY	P	Homo sapiens
610	190711	G Protein-Coupled Receptor GPR85 (SREB2)	NM_018970	ggcacgagga ttttactgct gtctcaagat cagattatta ctgtagagaa gatttttatt ttttgtttca ttaacagatt attataaagc aaaaagcatg cagaaaaaga agcagacgtt ttacattggg aattaatgaa agcgtgtctg ctagttttgg gtaggagaac tgggaagttg ttgcttaaaa ttttatatca cctccacaaa caaaactctt cggaaatggt aaaataagaa aatgcatgat tctagaggca ttcctaagca cccacgtgtc aggctttgtg gtgtctgtgg tatcatccga ccgtttggac tggttagggc ttactgagag ctccatttct ggaaagcctt acaagactga ggaatatcag actgcgaatc accgggaacg gttcctttgc agcacagaag caatctctct ccccatcttc gcatattctg atggcaaaac aagtggaaga aaagaggaag catgactgca gatcagatca gttctctttg tggattatat tttcagtaaa atgtatggat ctatcttttc cttgttctta tatctagatc atgagacttg actgaggctg tatccttatc ctccatccat ctatggcgaa ctatagccat gcagctgaca acatttttgca aaatctctcg cctctaacag cctttctgaa actgacttcc ttgggtttca taataggagt cagcgtggtg ggcaacctcc tgatctccat tttgctagtg aaagataaga ccttgcatag agcaccttac tacttcctgt tggatctttg ctgttcagat atcctcagat ctgcaatttg tttcccattt gtgttcaact ctgtcaaaaa tggctctacc tggacttatg ggactctgac ttgcaaagtg attgcctttc tgggggtttt gtcctgtttc cacactgctt tcatgctctt ctgcatcagt gtcaccagat acttagctat cgcccatcac cgcttctata caaagaggct gaccttttgg acgtgtctgg ctgtgatctg tatggtgtgg actctgtctg tggccatggc atttcccccg gttttagacg tgggcactta ctcattcatt agggaggaag atcaatgcac cttccaacac cgctccttca gggctaatga ttccttagga tttatgctgc ttcttgctct catcctccta gccacacagc ttgtctacct caagctgata tttttcgtcc acgatcgaag aaaaatgaag ccagtccagt ttgtagcagc agtcagccag aactggactt ttcatggtcc tggagccagt ggccaggcag ctgccaattg gctagcagga tttggaaggg gtcccacacc acccaccttg ctgggcatca ggcaaaatgc aaacaccaca ggcagaagaa ggctattggt cttagacgag ttcaaaatgg agaaaagaat cagcagaatg ttctatataa tgacttttct gtttctaacc ttgtggggcc cctacctggt ggcctgttat tggagagttt ttgcaagagg gcctgtagta ccagggggat ttctaacagc tgctgtctgg atgagttttg cccaagcagg aatcaatcct tttgtctgca ttttctcaaa cagggagctg aggcgctgtt tcagcacaac ccttctttac tgcagaaaat ccaggttacc aagggaacct tactgtgtta tatgagggag catctgtaaa tctttagcct tgtgaaaact aaccttctct gctgagcaat tgtggcccat agccatattt tgagaagaaa ttcaagaatg gaatcagcag ttttaaggat ttgggcaaca ttctgcagtc tttgcaatag ttcacctata atcctatttt aaatctcaga gtgatcctgc tgactgccag caaaggtttg taattaagaa gggactgaac cactgcccta agtttcttta tgtggtcaaa aactagataa tgaaagtagc aggtgctaag tatcagtgct aaatgctctg tatgtcacta catatgaaaa aacatcaaaa aacaattagc attggacatc ttaataaatt aagttgacat gaggtaaatg tgttgataaa aactaatttt agaagtttga agactttaaa acatttcata ctactattgt tttgcaaaga ctaaaatatt tggggactta aagtactgta atccactaaa gacgtgccaa tgaattattg gaatatcaca ctttaaaaac cgccttgtaa gttctgggga gcattccaaa gcagtatatt ggttccaatt agagtttact tttttgtat taatacattg ctatttctaa	A	Homo sapiens

				ataccacttt cctcatctac tagtaagatt gctagcattg aactgtatta tgtggttttt gttgatttgg tataaagttt ttccaattca tttatatttt acaaatgcta gatattggtc tgggaggcaa cattaatggt accagcctgt cacaactgag cagttctaat aatgcagaat aaatacatgt tgccttaaag ggttatctag tatccttcat cttatttagc actggagcaa atagccaagg gaaatcaaat cagtaactgg tcatggtcat gcatctaaaa gtgcatggaa gatcatttat tactttttcc tttttttctc acatggtttg aaacttaaag tgcacatcac tgaaataatg agattttctt ctacggtgtg ctaccctttc taaactgttc taagaagcag gcagttgatg tatgtttata ttttaagtca gctgtcaagg ggagaccaca gccttagtat gacatcctgc acaatttgtg aagcatttat tctactgaag gcacagtctt gtttatactt tctgcacatt cagtgtattg gtaatttaaa ttatttcagt tttaacttgt gaaagcttat attatgattt ctggtatttt agaaatacat tagagtctgt gagtctcatt ctttaagata cagatgtgtg aacttcaata taaagttgca tttgccaaaa tttacccgtg tagcctgtta attttcttga aataagtttt acatttttgg cacataacaa cgtttttttt aatttgggag gcaagcacaa actaggaaga ctagctttat tatggttttg ctttttgatt cttgtagcta ctatattcca gactggaaat gtatgaatga taatcaacat aatgctgata aactgacata atattatctg taaaagcatt atttggtagt ttattataat catccctcta ttattcttaa atgccagtag tatttagaga tgtgtacctg cttagttaat tggctcagaa ttttaatata aacatcacac tttaatttgg agcatagtac catagaaatt tggggttcta aatatacaac ttgtaagaag aatggtttac actaacatta tgacaaaact agaaaaagtt attatttttg tttgctttct gttgttttgt ttattggttg gtttttgtga agtttatttt tttttggta tttgataatt aagattagga atctaataac acagaattcc atattgctat agtacttctg taaagagaat atcaatataa ataaggaaaa taaatcaatg aaatgtttca atggttaaaa aaaaaaaaaa aaaaa		
611	190711	G Protein-Coupled Receptor GPR85 (SREB2)	NP_061843.1	MANYSHAADN ILQNLSPLTA FLKLTSLGFI IGVSVVGNLL ISILLVKDKT LHRAPYYFLL DLCCSDILRS AICFPFVFNS VKNGSTWTYG TLTCKVIAFL GVLSCFHTAF MLFCISVTRY LAIAHHRFYT KRLTFWTCLA VICMVWTLSV AMAFPPVLDV GTYSFIREED QCTFQHRSFR ANDSLGFMLL LALILLATQL VYLKLIFFVH DRRKMKPVQF VAAVSQNWTF HGPGASGQAA ANWLAGFGRG PTPPTLLGIR QNANTTGRRR LLVLDEFKME KRISRMFYIM TFLFLTLWGP YLVACYWRVF ARGPVVPGGF LTAAVWMSFA QAGINPFVCI FSNRELRRCF STTLLYCRKS RLPREPYCVI	P	Homo sapiens
612	190725	G Protein-Coupled Receptor GPR26	LG93120	aggctagtgg agctcttctc cacggtgccc atcggctccc actggggggt gctgtccaag tgcttggcgt acagcaaggc cgcatccgac ccctttgtgt actccttact gcgacaccag taccgcaaaa gctgcaagga gattctgaac aggctcctgc acagacgctc catccactcc tctggcctca caggcgactc tcacagccag aacattctgc cggtgtctga g	A	Homo sapiens
613	190725	G Protein-Coupled Receptor GPR26	LR26	MNSWDAGLAG LLVGTMGVSL LSNALVLLCL LHSADIRRQA PALFTLNLTC GNLLCTVVNM PLTLAGVVAR RQPAGDRLCR LAAFLDTFLA ANSMLSMAAL SIDRWVAVVF PLSYRAKMRL RDAALMVAYT WLHALTFPAA ALALSWLGFH QLYASCTLCS RRPDERLRFA VFTGAFHALS FLLSFVVLCC TYLKVARFHC KRIDVITMQT LVLLVDLHPS VRERCLEEQK RRRQRATKKI STFIGTFLVC FAPYVITRLV ELFSTVPIGS HWGVLSKCLA YSKAASDPFV YSLLRHQYRK SCKEILNRLL HRRSIHSSGL TGDSHSQNIL PVSE	P	Homo sapiens
614	190741	Sreb3	NM_018969	atggccaaca ctaccggaga gcctgaggag gtgagcggcg ctctgtcccc accgtccgca tcagcttatg tgaagctggt actgctggga ctgattatgt gcgtgagcct ggcgggtaac gccatcttgt ccctgctggt gctcaaggag cgtgccctgc acaaggctcc ttactacttc ctgctggacc tgtgcctggc cgatggcata cgctctgccg tctgcttccc ctttgtgctg gcttctgtgc gccacggctc ttcatggacc ttcagtgcac tcagctgcaa gattgtggcc tttatggccg tgctctttg cttccatgcg gccttcatgc tgttctgcat cagcgtcacc cgctacatgg ccatcgccca ccaccgcttc tacgccaagc gcatgacact ctggacatgc gcggctgtca tctgcatggc ctggaccctg tctgtggcca tggccttccc acctgtcttt gacgtgggca cctacaagtt tattcgggag gaggaccagt gcatctttga gcatcgctac ttcaaggcca atgacacgct gggcttcatg cttatgttgg ctgtgctcat	A	Homo sapiens

				ggcagctacc catgctgtct acggcaagct gctcctcttc gagtatcgtc accgcaagat gaagccagtg cagatggtgc cagccatcag ccagaactgg acattccatg gtcccggggc caccggccag gctgctgcca actggatcgc cggctttggc cgtgggccca tgccaccaac cctgctgggt atccggcaga atgggcatgc agccagccgg cggctactgg gcatggacga ggtcaagggt gaaaagcagc tgggccgcat gttctacgcg atcacactgc tctttctgct cctctggtca ccctacatcg tggcctgcta ctggcgagtg tttgtgaaag cctgtgctgt gccccaccgc tacctggcca ctgctgtttg gatgagcttc gcccaggctg ccgtcaaccc aattgtctgc ttcctgctca acaaggacct caagaagtgc ctgaggactc acgccccctg ctggggcaca ggaggtgccc cggctcccag agaaccctac tgtgtcatgt ga		
615	190741	Sreb3	NP_061842.1	MANTTGEPEE VSGALSPPSA SAYVKLVLLG LIMCVSLAGN AILSLLVLKE RALHKAPYYF LLDLCLADGI RSAVCFPFVL ASVRHGSSWT FSALSCKIVA FMAVLFCFHA AFMLFCISVT RYMAIAHHRF YAKRMTLWTC AAVICMAWTL SVAMAFPPVF DVGTYKFIRE EDQCIFEHRY FKANDTLGFM LMLAVLMAAT HAVYGKLLLF EYRHRKMKPV QMVPAISQNW TFHGPGATGQ AAANWIAGFG RGPMPPTLLG IRQNGHAASR RLLGMDEVKG EKQLGRMFYA ITLLFLLLWS PYIVACYWRV FVKACAVPHR YLATAVWMSF AQAAVNPIVC FLLNKDLKKC LRTHAPCWGT GGAPAPREPY CVM	P	Homo sapiens
616	190742	G Protein-Coupled Receptor H7TBA62	E32367	gagctctgtc cacagactag agcaggaaag gggggaaagg cggcgataga ggttagcagg aatgtttaat tatcaggagc aggaacagaa ctgagggcat gcccaggtcc acacaggccc tcataggccc agtgttccca gtggggagga aacaggaagc tgtgacttcc tctctctttt ccctccctgc tcttagcctc aaggtcactg ctgctgagat gaattccaac ctgttttagt tggcactgtt ccctgggcat ggtaatagcc tctcagtacc cttctgccac aaacacccca aacttctcct ttgaaataat attcatacaa attgctattt cacatgtatt ctctcattgc atcatgccac tcctgtgaag cagacttacc tgaaaatttt aagcaagaaa acaggcttag gggagtaaag taactctccc agtcacacgg ctagtgagca gcaggtctgg gactccgcag cctccgctct ttcctctctt ggacacccat gctgattccc tgcctctatg ccacctccca ggccccttgc tttgggcccc aagggaacac tttttgcaga ggagggaggc ctctgcactg ttaggaacag aggcagctct agtttggttc ctgtcatctc tgggacaggg aaacctccag ctctctccct ggggtggagg cttggggctg ccctccatag cggggtaact ctcccttctc ccctccctct ctgccattta gagcccctct tacaggcggg cgcatgcaca tataccctgg cattcaggct gtgcctcgcc ctgcccccacc taccaccaat cttgaccaac aggaaggtgg tgggttgtcc tttccacacc cctccctctg aggtgtgggc gtgggccagg gctcaccaga ggccccagag aagcacttaa ttctacagcc tccttcctag agccttcagt ggcctctgcc agtctggcag acacttgcag acctctcttc tcagcaccac caatctctga tgccctgcga tgcccacact caatacttct gcctctccac ccacattctt ctgggccaat gcctccggag gcagtgtgct gagtgctgat gatgctccga tgcctgtcaa attcctagcc ctgaggctca tggttgccct ggcctatggg cttgtggggg ccattggctt gctgggaaat ttggcggtgc tgtgggtact gagtaactgt gcccggagag cccctggccc accttcagac accttcgtct tcaacctggc tctggcggac ctgggactgg cactcactct cccctttttgg gcagccgagt cggcactgga ctttcactgg cccttcggag gtgccctctg caagatggtt ctgacggcca ctgtcctcaa cgtctatgcc agcatcttcc tcatcacagc gctgagcgtt gctcgctact gggtggtggc catggctgcg gggccaggca cccacctctc actcttctgg gcccgaatag ccaccctggc agtgtgggcg gcggctgccc tggtgacggt gcccacagct gtcttcgggg tggagggtga ggtgtgtggt gtgcgccttt gcctgctgcg tttccccagc aggtactggc tgggggccta ccagctgcag agggtggtgc tggctttcat ggtgcccttg ggcgtcatca ccaccagcta cctgctgctg ctggccttcc tgcagcggcg gcaacggcgg cggcaggaca gcagggtcgt ggcccgctct gtccgcatcc tggtggcttc cttcttcctc tgctggtttc ccaaccatgt ggtcactctc tggggtgtcc tggtgaagtt tgacctggtg ccctggaaca gtactttcta tactatccag acgtatgtct tccctgtcac tacttgcttg gcacacagca atagctgcct caaccctgtg ctgtactgtc tcctgaggcg ggagccccgg caggctctgg caggcacctt cagggatctg cggtcgaggc tgtggcccca gggcggaggc tgggtgcaac aggtggccct	A	Unidentified

				aaagcaggta ggcaggcggt gggtcgcaag caaccccogg gagagccgcc cttctaccct gctcaccaac ctggacagag ggacacccgg gtgaagggcg caagctgaac acactcctct ttctgagatc caccaagtgt aggatccttg agtcctgggg agaagctgcc ctctctgcca ggctgcagtg ccctcaggga aaaagtctga tctttgatcc ccaactctgg gtgtggtgaa tgggggaggc gggggctcag atcagagctg gatgtgacaa agcttaagtc tttatttgga gatgggaaag aagaggatct gagaataaac ctctggatta tccacaaatt gtcttgacct tttatcccag ttccacctcc agttcagtat ggaacaaaag gattcgttgc tccatttctg ctttcgcaag aatacctagg aaaacttccc taagggttct aggctaatga atcagaggtc agtgcccatc tctctctgta cccacccccc acctcaaaac agggtatccc ttgtctttct ccggtatcaa ggccaaaaat gccagcttcc cctgtcctca ccttaccatc tcagtggtga ccactgaaac ttgctgcctg cagaggcctc agctgcaaaa gctgtagttc ccttgaaggg atgccaggtg tggggtattg ctggaatttc cagcacctgc caggccctgg gtgtaaaacc ctggtgctga cgggagtgcc tgtgtgtctc cctctaaatc aggatttgaa agaagtgaag ataatgacaa gtcaaagaca tgggtggggt gaagggaggt gagcgattaa agaggggagg gggctgggag aacaggctgc aggtagagcc agaaaagcag agactccaga aagtggtgct agtcctccct gccccaaatg caaagcccag agtatcaatt tgagtgtcag agcacctgga ttcacagctt tacctccagc aaattacttt acctctttgt acctcactgt tctcaactgt aaaatgggct actaaagatt taacagtgaa atatactgtt agctattatt cttgtttgtt tgtttgtttg tttgagacag agtctcgttc tgtcgcccag gctggagtgc agtggtgtga tctcagctca ctgcaacctc cgcttcccgg gttcaagcga ttctcctgcc tcagcctccc gagtagctgg gactacaggc tcccgctacc atgcctggcc aattttttgt aatttttaat agagacagag tttcaccata ttggccaggc tggtctcaaa ctcctgacct ctagtgatct gcccacctcg gcctcccaaa gtgctggagt tacaggcgtg agccaccgca cccggtcgag ctattattct tacaccctgt gtaaaatgga gacagagaga tgggaggaaa taagcgtgca gctgggagat ggggatgggg aaccatgtct cagctggaat ggttgtatat gctctgaagt ggggtataat gaaagtctca cataaagaac tcagaggttg gcccctaagc ccctcttgaa ggtgtgttct ccaggacagg ggttcctctt tggttcctgt attgagatgc atcaatgata aaggttagcc atcagaagga ttttctagga ggcagcccct agaaaggagg gaggcagagg gaagatgagg tagagctc		
617	190742	G Protein-Coupled Receptor H7TBA62	ENSP00000201359	MPTLNTSASP PTFFWANASG GSVLSADDAP MPVKFLALRL MVALAYGLVG AIGLLGNLAV LWVLSNCARR APGPPSDTFV FNLALADLGL ALTLPFWAAE SALDFHWPFG GALCKMVLTA TVLNVYASIF LITALSVARY WVVAMAAGPG THLSLFWARI ATLAVWAAAA LVTVPTAVFG VEGEVCGVRL CLLRFPSRYW LGAYQLQRVV LAFMVPLGVI TTSYLLLLAF LQRRQRRRQD SRVVARSVRI LVASFFLCWF PNHVVTLWGV LVKFDLVPWN STFYTIQTYV FPVTTCLAHS NSCLNPVLYC LLRREPRQAL AGTFRDLRLR LWPQGGGWVQ QVALKQ	P	Homo sapiens
618	190743	G Protein-Coupled Receptor GPRC5D	NM_018654	atgtacaagg actgcatcga gtccactgga gactattttc ttctctgtga cgccgagggg ccatggggca tcattctgga gtccctggcc atacttggca tcgtggtcac aattctgcta ctcttagcat ttctcttcct catgcgaaag atccaagact gcagccagtg gaatgtcctc cccacccagc tcctcttcct cctgagtgtc ctggggctct tcggactcgc tttgccttc atcatcgagc tcaatcaaca aactgccccc gtacgctact ttctctttgg ggttctcttt gctctctgtt tctcatgcct cttagctcat gcctccaatc tagtgaagct ggttcggggt tgtgtctcct tctcctggac gacaattctg tgcattgcta ttggttgcag tctgttgcaa atcattattg ccactgagta tgtgactctc atcatgacca gaggtatgat gtttgtgaat atgacaccct gccagctcaa tgtggacttt gttgtactcc tggtctatgt cctcttcctg atggccctca cattcttcgt ctccaaagcc accttctgtg gcccgtgtga gaactggaag cagcatggaa ggctcatctt tatcactgtg ctcttctcca tcatcatctg ggtggtgtgg atctccatgc tcctgagagg caacccgcag ttccagcgac agccccagtg ggacgacccg gtcgtctgca ttgctctggt caccaacgca tgggttttcc tgctgctgta catcgtccct gagctctgca ttctctacag atcgtgtaga caggagtgcc ctttacaagg caatgcctgc cccgtcacag cctaccaaca cagcttccaa gtggagaacc aggagctctc cagagcccga gacagtgatg gagctgagga ggatgtagca ttaacttcat atggtactcc cattcagccg cagactgttg atcccacaca agagtgtttc atcccacagg ctaaactaag cccccagcaa ...	A	Homo sapiens

				gatgcaggag gagtataa		
619	190743	G Protein-Coupled Receptor GPRC5D	NP_061124.1	MYKDCIESTG DYFLLCDAEG PWGIILESLA ILGIVVTILL LLAFLFLMRK IQDCSQWNVL PTQLLFLLSV LGLFGLAFAF IIELNQQTAP VRYFLFGVLF ALCFSCLLAH ASNLVKLVRG CVSFSWTTIL CIAIGCSLLQ IIIATEYVTL IMTRGMMFVN MTPCQLNVDF VVLLVYVLFL MALTFFVSKA TFCGPCENWK QHGRLIFITV LFSIIIWVVW ISMLLRGNPQ FQRQPQWDDP VVCIALVTNA WVFLLLYIVP ELCILYRSCR QECPLQGNAC PVTAYQHSFQ VENQELSRAR DSDGAEEDVA LTSYGTPIQP QTVDPTQECF IPQAKLSPQQ DAGGV	P	Homo sapiens
620	190744	G Protein-Coupled Receptor GPRC5C	NM_018653	cgggcaggtg gggaacctcc ctgaagagtg ccctggtcac agcacccttg aagacagcca ttggccatgg ggacccaacc agagcctggc ctgggagcca ggatggccat ccacaaagcc ttggtgatgt gcctgggact gcctctcttc ctgttcccag ggcctgggc ccagggccat gtcccacccg gctgcagcca aggcctcaac cccctgtact acaacctgtg tgaccgctct ggggcgtggg gcatcgtcct ggaggccgtg gctggggcgg gcattgtcac cacgtttgtg ctcaccatca tcctggtggc cagcctcccc tttgtgcagg acaccaagaa acggagcctg ctggggaccc aggtattctt ccttctgggg accctgggcc tcttctgcct cgtgtttgcc tgtgtggtga agcccgactt ctccacctgt gcctctcggc gcttcctctt tggggttctg ttcgccatct gcttctcttg tctggcggct cacgtctttg ccctcaactt cctggcccgg aagaaccacg ggccccgggg ctgggtgatc ttcactgtgg ctctgctgct gaccctggta gaggtcatca tcaatacaga gtggctgatc atcaccctgg ttcggggcag tggcgagggc ggccctcagg gcaacagcag cgcaggctgg gccgtggcct ccccctgtgc cgtcgccaac atggactttg tcatggcact catctacgtc atgctgctgc tgctgggtgc cttcctgggg gcctggcccg ccctgtgtgg ccgctacaag cgctggcgta agcatggggt ctttgtgctc ctcaccacag ccacctccgt tgccatatgg gtggtgtgga tcgtcatgta tacttacggc aacaagcagc acaacagtcc cacctgggat gaccccacgc tggccatcgc cctcgccgcc aatgcctggg ccttcgtcct cttctacgtc atccccgagg tctcccaggt gaccaagtcc agcccagagc aaagctacca gggggacatg taccccaccc ggggcgtggg ctatgagacc atcctgaaag agcagaaggg tcagagcatg ttcgtggaga acaaggcctt ttccatggat gagccggttg cagctaagag gccggtgtca ccatacagcg ggtacaatgg gcagctgctg accagtgtgt accagcccac tgagatggcc ctgatgcaca aagttccgtc cgaaggagct tacgacatca tcctcccacg ggccaccgcc aacagccagg tgatgggcag tgccaactcg accctgcggg ctgaagacat gtactcggcc cagagccacc aggcggccac accgccgaaa gacggcaaga actctcaggt ctttagaaac cctacgtgt gggactgagt cagcggtggc gaggagaggc gggcggattt ggggagggcc ctgaggacct ggccccgggc aagggactct ccaggctcct cctccccctg gcaggccagc aacatgtgcc ccagatctgg aagggcctcc ctctctgcca gtgtttgggt gggtgtcatg ggtgtcccca cccactcctc agtgtttgtg gagtcgagga gccaacccca gcctcctgcc aggatcacct cggcggtcac actccagcca aatagtgttc tcggggtggt ggctgggcag cgcctatgtt tctctggaga ttcctgcaac ctcaagagac ttcccaggcg ctcaggcctg gatcttgctc ctctgtgagg aacaagggtg cctaataaat acatttctgc tttattaaaa aaaaaaaaaa aaaa	A	Homo sapiens
621	190744	G Protein-Coupled Receptor GPRC5C	NP_061123.2	MGTQPEPGLG ARMAIHKALV MCLGLPLFLF PGAWAQGHVP PGCSQGLNPL YYNLCDRSGA WGIVLEAVAG AGIVTTFVLT IILVASLPFV QDTKKRSLLG TQVFFLLGTL GLFCLVFACV VKPDFSTCAS RRFLFGVLFA ICFSCLAAHV FALNFLARKN HGPRGWVIFT VALLLTLVEV IINTEWLIIT LVRGSGEGGP QGNSSAGWAV ASPCAVANMD FVMALIYVML LLLGAFLGAW PALCGRYKRW RKHGVFVLLT TATSVAIWVV WIVMYTYGNK QHNSPTWDDP TLAIALAANA WAFVLFYVIP EVSQVTKSSP EQSYQGDMYP TRGVGYETIL KEQKGQSMFV ENKAFSMDEP VAAKRPVSPY SGYNGQLLTS VYQPTEMALM HKVPSEGAYD IILPRATANS QVMGSANSTL RAEDMYSAQS HQAATPPKDG KNSQVFRNPY VWD	P	Homo sapiens

622	190745	G Protein-Coupled Receptor LGR7	NM_021634	atgacatctg gttctgtctt cttctacatc ttaatttttg gaaaatattt ttctcatggg ggtggacagg atgtcaagtg ctcccttggc tatttcccct gtgggaacat cacaaagtgc ttgcctcagc tcctgcactg taacggtgtg gacgactgcg ggaatcaggc cgatgaggac aactgtggag acaacaatgg atggtccatg caatttgaca aatattttgc cagttactac aaaatgactt cccaatatcc ttttgaggca gaaacacctg aatgtttggt cggttctgtg ccagtgcaat gtctttgcca aggtctggag cttgactgtg atgaaaccaa tttacgagct gttccatcgg tttcttcaaa tgtgactgca atgtcacttc agtggaactt aataagaaag cttcctcctg attgcttcaa gaattatcat gatcttcaga agctgtacct gcaaaacaat aagattacat ccatctccat ctatgctttc agaggactga atagccttac taaactgtat ctcagtcata acagaataac cttcctgaag ccgggtgttt ttgaagatct tcacagacta gaatggctga taattgaaga taatcacctc agtcgaattt ccccaccaac attttatgga ctaaattctc ttattctctt agtcctgatg aataacgtcc tcacccgttt acctgataaa cctctctgtc aacacatgcc aagactacat tggctggacc ttgaaggcaa ccatatccat aatttaagaa atttgacttt tatttcctgc agtaatttaa ctgttttagt gatgaggaaa aacaaaatta atcacttaaa tgaaaatact tttgcacctc tccagaaact ggatgaattg gatttaggaa gtaataagat tgaaaatctt ccaccgctta tattcaagga cctgaaggag ctgtcacaat tgaatctttc ctataatcca atccagaaaa ttcaagcaaa ccaatttgat tatcttgtca aactcaagtc tctcagccta gaagggattg aaatttcaaa tatccaacaa aggatgttta gacctcttat gaatctctct cacatatatt ttaagaaatt ccagtactgt gggtatgcac cacatgttcg cagctgtaaa ccaaacactg atggaatttc atctctagag aatctcttgg caagcattat tcagagagta tttgtctggg ttgtatctgc agttacctgc tttggaaaca tttttgtcat ttgcatgcga ccttatatca ggtctgagaa caagctgtat gccatgtcaa tcatttctct ctgctgtgcc gactgcttaa tgggaatata tttattcgtg atcggaggct ttgacctaaa gtttcgtgga gaatacaata agcatgcgca gctgtggatg gagagtactc attgtcagct tgtaggatct ttggccattc tgtccacaga agtatcagtt ttactgttaa catttctgac attggaaaaa tacatctgca ttgtctatcc ttttagatgt gtgagacctg gaaaatgcag aacaattaca gttctgattc tcatttggat tactggtttt atagtggctt tcattccatt gagcaataag gaatttttca aaaactacta tggcaccaat ggagtatgct tccctcttca ttcagaagat acagaaagta ttggagccca gatttattca gtggcaattt ttcttggtat taatttggcc gcatttatca tcatagtttt ttcctatgga agcatgtttt atagtgttca tcaaagtgcc ataacagcaa ctgaaatacg gaatcaagtt aaaaaagaga tgatccttgc caaacgtttt ttctttatag tatttactga tgcattatgc tggataccca tttttgtagt gaaatttctt tcactgcttc aggtagaaat accaggtacc ataacctctt gggtagtgat ttttattctg cccattaaca gtgctttgaa cccaattctc tatactctga ccacaagacc atttaaagaa atgattcatc ggttttggta taactacaga caaagaaaat ctatggacag caaaggtcag aaaacatatg ctccatcatt catctgggtg gaaatgtggc cactgcagga gatgccacct gagttaatga agccggacct tttcacatac ccctgtgaaa tgtcactgat ttctcaatca acgagactca attcctattc atga	A	Homo sapiens
623	190745	G Protein-Coupled Receptor LGR7	NP_067647.1	MTSGSVFFYI LIFGKYFSHG GGQDVKCSLG YFPCGNITKC LPQLLHCNGV DDCGNQADED NCGDNNGWSM QFDKYFASYY KMTSQYPFEA ETPECLVGSV PVQCLCQGLE LDCDETNLRA VPSVSSNVTA MSLQWNLIRK LPPDCFKNYH DLQKLYLQNN KITSISIYAF RGLNSLTKLY LSHNRITFLK PGVFEDLHRL EWLIIEDNHL SRISPPTFYG LNSLILLVLM NNVLTRLPDK PLCQHMPRLH WLDLEGNHIH NLRNLTFISC SNLTVLVMRK NKINHLNENT FAPLQKLDEL DLGSNKIENL PPLIFKDLKE LSQLNLSYNP IQKIQANQFD YLVKLKSLSL EGIEISNIQQ RMFRPLMNLS HIYFKKFQYC GYAPHVRSCK PNTDGISSLE NLLASIIQRV FVWVVSAVTC FGNIFVICMR PYIRSENKLY AMSIISLCCA DCLMGIYLFV IGGFDLKFRG EYNKHAQLWM ESTHCQLVGS LAILSTEVSV LLLTFLTLEK YICIVYPFRC VRPGKCRTIT VLILIWITGF IVAFIPLSNK EFFKNYYGTN GVCFPLHSED TESIGAQIYS VAIFLGINLA AFIIIVFSYG SMFYSVHQSA ITATEIRNQV KKEMILAKRF FFIVFTDALC WIPIFVVKFL SLLQVEIPGT ITSWVVIFIL PINSALNPIL YTLTTRPFKE MIHRFWYNYR QRKSMDSKGQ KTYAPSFIWV EMWPLQEMPP ELMKPDLFTY PCEMSLISQS TRLNSYS	P	Homo sapiens

624	190748	GPCR Ls190748	AX147756	gtctgggggt gggggatgct gggacagggg tcaattgcct gaagcaagtg ctctcatccc cctagctcct gctgatctag ttggggctcc agagtgggga ggagaaaggc actttgaaac ttctctgccc ttaccgtctt agccatcaaa ctctgagctg gagatagtga cgatgtgaca ggaactttcc ctgggcctct ctgggccaca attcctggcc gagagaaaga ggaggaatga ggtgagcacc ttcttcactc ctagggccat gtggtagagc tgcagtcgca cctccttctg ccaataggca tagatgagtg ggttgagcag ggagttgccc acgccgagca gccacaggta ccgttccagc actaggtaga ggtgacactc ctggcaggcc acctgcacaa tgccagtgat aaggaagggg gtccaggata gagcaaagct cccaatgaga acagacacag tacggagagc tttgaagtcg ctgggagtcc gtggggatcg ataacctcca gccatggctc ctgcatgttc catctttcga atctgctggc tgtgcatgga ggcaatcttg agcatgtcgc agtagaagaa gacaaagagg agcatggctg ggaagaagcc aacgcaggag agggtcagca cgaagtgagg gtgaaataca gcaaagaagc tgcactgccc tttgtaggca gtctgctgga acatggggat tccgagtggg aggaagccaa tgaggtaaga cactaaccac agcccggcaa tgcaggcccc ggccacgaac ccactcatga tcttcaagta gcggaagggc tgcttgatgg caaggtacct gtcaaaggtg atcagcatga ccgtgaggac agaggcagct gcggaggaag tgacaaatgc catccgcagg ctgcacaggg tcttctgtgt gggccgagaa gggctggaga gctggtctgt gagtaggcca gagatggcca caccaatcaa ggtgtcagcc acagccagat tcaaggtgaa gcagagactg acaccatcat tcttgtggat caacagcagc acagccacag ccactagtgt gttagtagca atgatgaggg aggccaggac agcaaggatc actccaaatg agaaagatga ttccatgtct cgaagtggca ggacttcact taccagggca tg	A	Homo sapiens
625	190748	GPCR Ls190748	CAC39548.1	MESSFSFGVI LAVLASLIIA TNTLVAVAVL LLIHKNDGVS LCFTLNLAVA DTLIGVAISG LLTDQLSSPS RPTQKTLCSL RMAFVTSSAA ASVLTVMLIT FDRYLAIKQP FRYLKIMSGF VAGACIAGLW LVSYLIGFLP LGIPMFQQTA YKGQCSFFAV FHPHFVLTLS CVGFFPAMLL FVFFYCDMLK IASMHSQQIR KMEHAGAMAG GYRSPRTPSD FKALRTVSVL IGSFALSWTP FLITGIVQVA CQECHLYLVL ERYLWLLGVG NSLLNPLIYA YWQKEVRLQL YHMALGVKKV LTSFLLFLSA RNCGPERPRE SSCHIVTISS SEFDG	P	Homo sapiens
626	190749	G Protein-Coupled Receptor GPR62	AF317653	atggccaact ccacagggct gaacgcctca gaagtcgcag gctcgttggg gttgatcctg gcagctgtcg tggaggtggg ggcactgctg ggcaacggcg cgctgctggt cgtggtgctg cgcacgccgg gactgcgcga cgcgctctac ctggcgcacc tgtgcgtcgt ggacctgctg gcggccgcct ccatcatgcc gctgggcctg ctggccgcac cgccgcccgg gctgggccgc gtgcgcctgg gccccgcgcc atgccgcgcc gctcgcttcc tctccgccgc tctgctgccg gcctgcacgc tcggggtggc cgcacttggc ctggcacgct accgcctcat cgtgcacccg ctgcggccag gctcgcggcc gccgcctgtg ctcgtgctca ccgccgtgtg ggccgcggcg ggactgctgg gcgcgctctc cctgctcggc ccgccgcccg caccgccccc tgctcctgct cgctgctcgg tcctggctgg gggcctcggg cccttccggc cgctctgggc cctgctggcc ttcgcgctgc ccgcccctcct gctgctcggc gcctacggcg gcatcttcgt ggtggcgcgt cgcgctgccc tgaggccccc acggccggcg cgcgggtccc gactccgctc ggactctctg gatagccgcc tttccatctt gccgccgctc cggcctcgcc tgcccggggg caaggcggcc ctggccccag cgctggccgt gggccaattt gcagcctgct ggctgcctta tggctgcgcg tgcctggcgc ccgcagcgcg ggccgcggaa gccgaagcgg ctgtcacctg ggtcgcctac tcggccttcg cggctcaccc cttcctgtac gggctgctgc agcgccccgt gcgcttggca ctgggccgcc tctctcgccg tgcactgcct ggacctgtgc gggcctgcac tccgcaagcc tggcacccgc gggcactctt gcaatgcctc cagagacccc cagagggccc tgccgtaggc ccttctgagg ctccagaaca gaccccccgag ttggcaggag ggcggagccc cgcataccag gggccacctg agagttctct ctcctga	A	Homo sapiens
627	190749	G Protein-Coupled Receptor GPR62	AAK12638.1	MANSTGLNAS EVAGSLGLIL AAVVEVGALL GNGALLVVVL RTPGLRDALY LAHLCVVDLL AAASIMPLGL LAAPPPGLGR VRLGPAPCRA ARFLSAALLP ACTLGVAALG LARYRLIVHP LRPGSRPPPV LVLTAVWAAA GLLGALSLLG PPPAPPPAPA RCSVLAGGLG PFRPLWALLA FALPALLLLG AYGGIFVVAR	P	Homo sapiens

				RAALRPPRPA RGSRLRSDSL DSRLSILPPL RPRLPGGKAA LAPALAVGQF AACWLPYGCA CLAPAARAAE AEAAVTWVAY SAFAAHPFLY GLLQRPVRLA LGRLSRRALP GPVRACTPQA WHPRALLQCL QRPPEGPAVG PSEAPEQTPE LAGGRSPAYQ GPPESSLS		
628	190774	Histamine H4 Receptor	NM_021624	ggaagactac acattttagg tatgtgatta gaaaacatac ttgtcagaat tgtctggctg gattaatttg ctaatttgac cttcttcatc atttgatgtg atgccagata ctaatagcac aatcaattta tcactaagca ctcgtgttac tttagcattt tttatgtcct tagtagcttt tgctataatg ctaggaaatg ctttggtcat tttagctttt gtggtggaca aaaaccttag acatcgaagt agttattttt ttcttaactt ggccatctct gacttctttg tgggtgtgat ctccattcct ttgtacatcc ctcacacgct gttcgaatgg gattttggaa aggaaatctg tgtattttgg ctcactactg actatctgtt atgtacagca tctgtatata acattgtcct catcagctat gatcgatacc tgtcagtctc aaatgctgtg tcttatagaa ctcaacatac tggggtcttg aagattgtta ctctgatggt ggccgtttgg gtgctggcct tcttagtgaa tgggccaatg attctagttt cagagtcttg gaaggatgaa ggtagtgaat gtgaacctgg attttttcg gaatggtaca tccttgccat cacatcattc ttggaattcg tgatcccagt catcttagtc gcttatttca acatgaatat ttattggagc ctgtggaagc gtgatcatct cagtaggtgc caaagccatc ctggactgac tgctgtctct tccaacatct gtggacactc attcagaggt agactatctt caaggagatc tctttctgca tcgacagaag ttcctgcatc ctttcattca gagagacaga ggagaaagag tagtctcatg ttttcctcaa gaaccaagat gaatagcaat acaattgctt ccaaaatggg ttccttctcc caatcagatt ctgtagctct tcaccaaagg gaacatgttg aactgcttag agccaggaga ttagccaagt cactggccat tctcttaggg gtttttgctg tttgctgggc tccatattct ctgttcacaa ttgtcctttc attttattcc tcagcaacag gtcctaaatc agtttggtat agaattgcat tttggcttca gtggttcaat tcctttgtca atcctctttt gtatccattg tgtcacaagc gctttcaaaa ggctttcttg aaaatatttt gtataaaaaa gcaacctcta ccatcacaac acagtcggtc agtatcttct taaagacaat ttctcacct ctgtaaattt tagtctcaat ctcacctaaa tgaatcaggt ctgcccttta tcttgccctt ttcattctac caacagatct gcactttgaa gtcaatggta aattactcca gtgaataata gcagtataat atgacttgat aatattttg taaacttgta gtcataatag tactatattc ttcttagtcc tcacctcttc cttgtctttt agatcttaat ttcatgctga ttacaaaaat ccagttttgt tttctttcta tgttccatgc ataatacagt cttaagtgaa tttctctttt ttaattttat cgtaatagaa acttatccag tttgaaaatc attccctaaa gcatgcaata ggaaaaagaa cctcctggct gggactgccc aactctgttc tgatcagtgg gtgggtgagg tagggtttga gttggcaaga gcagggaacg ggcatgtgcc caggtgagct cctgtgtgtg tccagatttt atattcctaa tcccagtaag gaagaaagcg tagtgtggga gaggagagag ctgatgactg cagttctcaa aggtcctcag tgaagttatt ttggaggccc tggtggtcac aggatcagaa ggcaagggat aggcagtggt caccaatggt tgaaagtatg gcttgtccca tttcttcctg ttctcttttt ctagcttcca catcagcttc cttttttgag aacatataga agaagaaggc taagagatgg tgaagagact gcatgattaa actagataga cctggtatac agtcactgaa ctagtagatg tcaataatta ttatttttaa aaatttttat ttgttggccg ggcatggtgg ctcacgcctg aaatcccagc actttgggag gccaaggtgg gcggatcatg aggtcaggag atcgagacca tcctggccaa catggtgaaa ccccatctgt actaaaatac aaacaagtag ctggttgtgg cgccgcatgc ctgtagtccc agctactcgg gaggctgagg caggggaatt gcttgaaccc gggaggcgga gtttgccag cctggcaaca gagcaagact ctgtctaaaa agaaaaaaaa attttttgt ttgagacagc atcttgctct gtctcccagg ctggagcgta gtaatgcaat catagctcac tgcagcctgg aactccttgg ctcaagcaat cctgctgcct tggcctccca agtatgtggg actacaggta ctcgccacca cacctggata attaaaaaat tatttctgta gagatgaagt ctcactgtgt tgcccagcct gggtgtcaat aattattttt taaaaaaaat ttttaaaaag gtttttgag acagattctt gctctgtcac ccaggctgga gtgcagtagc atgatcaggg atcactgcaa cctctgcctc ctgggttcaa gcgattcttg tgcctaagcc acctgagcag ctgggattgc aggtgcatgc caccatgcct ggctaatttt ggtattttta gtagagatga ggttttgcca ttttggtcag gctggaattt ttttttttt taattttgat aagacagggt attgccgtgt tggccagact ggtctcaaac tcctgggctg aaacaatcct cccgccttgg cctcccaaag tgctgggatt ataggcacaa gacaccacaa taattattgc ctgtatgtca attattattt taaaatattg ttgtatttac ttaatgtctt taatgcattt gcccaatatt ttacattgtt actgctcaga ggtattcctt tattatgtgg ttagcatagg ttatactttg ctgacgattc	A	Homo sapiens

				acatttatt agtttggtta tgttttgtcc ttttaaaaca ttttcttttg agatgggggt cttgctctgt tgcccacgca ggagtgcagt ggcatgctct cagctcactg cagccctgac tgcctaggct ccagcaatct tcttacgtca gcctccagag tagctgggac cgcaggcact tgccaccacg ccccactaaa aattttttaa attgttgcct ttcttgaagt gttctctgcc tgtctttgtc acaaaatttc atttttctca tagttaattt catctctccg gtaagatttt attggtgttt cttttataac tttgcagttc ttacaccgtt tggtgatttt catgtttctt agaaacttta aacctttaac ttcaaacatt aaaatacaag tcttttaagt acatgagtgc ttagaaatgt acataatgtt tatatacact tatgccttac attaaagtcc aatatgagaa atacatgttt aacattcaat aataatttta aaaatttgag aaataaactc tcataaatgc aaaaaaaaaa aaaaaaaaa		
629	190774	Histamine H4 Receptor	NP_067637.2	MPDTNSTINL SLSTRVTLAF FMSLVAFAIM LGNALVILAF VVDKNLRHRS SYFFLNLAIS DFFVGVISIP LYIPHTLFEW DFGKEICVFW LTTDYLLCTA SVYNIVLISY DRYLSVSNAV SYRTQHTGVL KIVTLMVAVW VLAFLVNGPM ILVSESWKDE GSECEPGFFS EWYILAITSF LEFVIPVILV AYFNMNIYWS LWKRDHLSRC QSHPGLTAVS SNICGHSFRG RLSSRRSLSA STEVPASFHS ERQRRKSSLM FSSRTKMNSN TIASKMGSFS QSDSVALHQR EHVELLRARR LAKSLAILLG VFAVCWAPYS LFTIVLSFYS SATGPKSVWY RIAFWLQWFN SFVNPLLYPL CHKRFQKAFL KIFCIKKQPL PSQHSRSVSS	P	Homo sapiens
630	190823	Formyl Peptide Receptor 1 (FPR1)	NM_002029	cccagaccta gaactaccca gagcaagacc acagctggtg aacagtccag gagcagacaa gatggagaca aattcctctc tccccacgaa catctctgga gggacacctg ctgtatctgc tggctatctc ttcctggata tcatcactta tctggtattt gcagtcacct ttgtcctcgg ggtcctgggc aacgggcttg tgatctgggt ggctggattc cggatgacac acacagtcac caccatcagt tacctgaacc tggccgtggc tgacttctgt ttcacctcca ctttgccatt cttcatggtc aggaaggcca tgggaggaca ttggcctttc ggctggttcc tgtgcaaatt cgtctttacc atagtggaca tcaacttgtt cggaagtgtc ttcctgatcg ccctcattgc tctggaccgc tgtgtttgcg tcctgcatcc agtctggacc cagaaccacc gcaccgtgag cctggccaag aaggtgatca ttgggccctg ggtgatggct ctgctcctca cattgccagt tatcattcgt gtgactacag tacctggtaa aacggggaca gtagcctgca cttttaactt ttcgccctgg accaacgacc ctaaagagag gataaatgtg gccgttgcca tgttgacggt gagaggcatc atccggttca tcattggctt cagcgcaccc atgtccatcg ttgctgtcag ttatgggctt attgccacca agatccacaa gcaaggcttg attaagtcca gtcgtccctt acgggtcctc tcctttgtcg cagcagcctt ttttctctgc tggtccccat atcaggtggt ggcccttata gccacagtca gaatccgtga gttattgcaa ggcatgtaca aagaaattgg tattgcagtg gatgtgacaa gtgccctggc cttcttcaac agctgcctca accccatgct ctatgtcttc atgggccagg acttccggga gaggctgatc cacgcccttc ccgccagtct ggagagggcc ctgaccgagg actcaaccca aaccagtgac acagctacca attctacttt accttctgca gaggtggagt tacaggcaaa gtgaggaggg agctggggga cactttcgag ctcccagctc cagcttcgtc tcaccttgag ttaggctgag cacaggcatt tcctgcttat tttaggatta cccactcatc agaaaaaaaa aaaaaagcct ttgtgtcccc tgatttgggg agaataaaca gatatgagtt t	A	Homo sapiens
631	190823	Formyl Peptide Receptor 1 (FPR1)	NP_002020.1	METNSSLPTN ISGGTPAVSA GYLFLDIITY LVFAVTFVLG VLGNGLVIWV AGFRMTHTVT TISYLNLAVA DFCFTSTLPF FMVRKAMGGH WPFGWFLCKF VFTIVDINLF GSVFLIALIA LDRCVCVLHP VWTQNHRTVS LAKKVIIGPW VMALLLTLPV IIRVTTVPGK TGTVACTFNF SPWTNDPKER INVAVAMLTV RGIIRFIIGF SAPMSIVAVS YGLIATKIHK QGLIKSSRPL RVLSFVAAAF FLCWSPYQVV ALIATVRIRE LLQGMYKEIG IAVDVTSALA FFNSCLNPML YVFMGQDFRE RLIHALPASL ERALTEDSTQ TSDTATNSTL PSAEVELQAK	P	Homo sapiens
632	190824	Formyl Peptide Receptor-like 2	NM_002030	atggaaacca acttctccat tcctctgaat gaaactgagg aggtgctccc tgagcctgct ggccacaccg ttctgtggat cttctcattg ctagtccacg gagtcacctt tgtcttcggg gtcctgggca atgggcttgt gatctgggtg gctggattcc ggatgacacg	A	Homo sapiens

		(FPRL2)		cacagtcaac accatctgtt acctgaacct ggccctagct gacttctctt tcagtgccat cctaccattc cgaatggtct cagtcgccat gagagaaaaa tggccttttg cgtcattcct atgtaagtta gttcatgtta tgatagacat caacctgttt gtcagtgtct acctgatcac catcattgct ctggaccgct gtatttgtgt cctgcatcca gcctgggccc agaaccatcg caccatgagt ctggccaaga gggtgatgac gggactctgg attttcacca tagtccttac cttaccaaat ttcatcttct ggactacaat aagtactacg aatggggaca catactgtat tttcaacttt gcattctggg gtgacactgc tgtagagagg ttgaacgtgt tcattaccat ggccaaggtc tttctgatcc tccacttcat tattggcttc acggtgccta tgtccatcat cacagtctgc tatgggatca tcgctgccaa aattcacaga aaccacatga ttaaatccag ccgtccctta cgtgtcttcg ctgctgtggt ggcttctttc ttcatctgtt ggttccctta tgaactaatt ggcattctaa tggcagtctg gctcaaagag atgttgttaa atggcaaata caaaatcatt cttgtcctga ttaacccaac aagctccttg gccttttta acagctgcct caacccaatt ctctacgtct ttatgggtcg taacttccaa gaaagactga ttcgctcttt gcccactagt ttggagaggg ccctgactga ggtccctgac tcagcccaga ccagcaacac acacaccact tctgcttcac ctcctgagga gacggagtta caagcaatgt ga		
633	190824	Formyl Peptide Receptor-like 2 (FPRL2)	NP_002021.2	METNFSIPLN ETEEVLPEPA GHTVLWIFSL LVHGVTFVFG VLGNGLVIWV AGFRMTRTVN TICYLNLALA DFSFSAILPF RMVSVAMREK WPFASFLCKL VHVMIDINLF VSVYLITIIA LDRCICVLHP AWAQNHRTMS LAKRVMTGLW IFTIVLTLPN FIFWTTISTT NGDTYCIFNF AFWGDTAVER LNVFITMAKV FLILHFIIGF TVPMSIITVC YGIIAAKIHR NHMIKSSRPL RVFAAVVASF FICWFPYELI GILMAVWLKE MLLNGKYKII LVLINPTSSL AFFNSCLNPI LYVFMGRNFQ ERLIRSLPTS LERALTEVPD SAQTSNTHTT SASPPEETEL QAM	P	Homo sapiens
634	190948	EMR2 Hormone Receptor	NM_013447	cggagacggg acagccctgt cccactcact ctttcccctg ctgctcctgc cggcagctca gctggaacca tgggaggccg cgtctttctc gtctttctcg cattctgtgt ctggctgact ctgccgggag ctgaaaccca ggactccagg ggctgtgccc ggtggtgccc tcaggactcc tcgtgtgtca atgccaccgc ctgtcgctgc aatccagggt tcagctcttt ttctgagatc atcaccaccc ccatggagac ttgtgacgac atcaacgagt gtgcaacact gtcgaaagtg tcatgcggaa aattctcgga ctgctggaac acagagggga gctacgactg cgtgtgcagc ccaggatatg agcctgtttc tggggcaaaa acattcaaga atgagagcga gaacacgtgt caagatgtgg acgaatgtca gcagaaccca aggctctgta aaagctacgg cacctgcgtc aacaccctcg gcagctacac gtgccagtgc ctgcctggct tcaagctcaa acctgaggac ccgaagctct gcacagatgt gaatgaatgc acctccggac aaaacccatg ccacagctcc acccactgcc tcaacaacgt gggcagctat cagtgccgct gccgcccggg ctggcaaccg attccggggt cccccaatgg cccaaacaat accgtctgtg aagatgtgga cgagtgcagc tccgggcagc atcagtgtga cagctccacc gtctgcttca acaccgtggg ttcatacagc tgccgctgcc gcccaggctg gaagcccaga cacggaatcc cgaataacca aaaggacact gtctgtgaag atatgacttt ctccacctgg accccgcccc ctggagtcca cagccagacg ctttcccgat tcttcgacaa agtccaggac ctgggcagag actacaagcc aggcttggcc aataacacca tccagagcat cttacaggcg ctggatgagc tgctggaggc ccctggggac ctggagaccc tgccccgctt acagcagcac tgtgtggcca gtcacctgct ggatggccta gaggatgtcc tcagaggcct gagcaagaac ctttccaatg ggctgttgaa cttcagttat cctgcaggca cagaattgtc cctggaggtg cagaagcaag tagacaggag tgtcaccttg agacagaatc aggcagtgat gcagctcgac tggaatcagg cacagaaatc tggtgaccca ggcccttctg tggtgggcct tgtctccatt ccagggatgg gcaagttgct ggctgaggcc cctctggtcc tggaacctga gaagcagatg cttctgcatg agacacacca gggcttgctg caggacggct cccccatcct gctctcagat gtgatctctg cctttctgag caacaacgac acccaaaacc tcagctcccc agttaccttc accttctccc accgttcagt gatcccgaga cagaaggtgc tctgtgtctt ctgggagcat ggccagaatg gatgtggtca ctgggccacc acaggctgca gcacaatagg caccagagac accagcacca tctgccgttg caccccacctg agcagctttg ccgtcctcat ggcccactac gatgtgcagg aggaggatcc cgtgctgact gtcatcacct acatggggct gagcgtctct ctgctgtgcc tcctcctggc ggccctcact tttctcctgt gtaaagccat ccagaacacc	A	Homo sapiens

				agcacctcac tgcatctgca gctctcgctc tgcctcttcc tggcccacct cctcttcctc gtggcaattg atcaaaccgg acacaaggtg ctgtgctcca tcatcgccgg taccttgcac tatctctacc tggccacctt cacctggatg ctgctggagg ccctgtacct cttcctcact gcacggaacc tgacggtggt caactactca agcatcaaca gattcatgaa gaagctcatg ttccctgtgg gctacggagt cccagctgtg acagtggcca tttctgcagc ctccaggcct cacctttatg gaacaccttc ccgctgctgg ctccaaccag aaaagggatt tatatggggc ttccttggac ctgtctgcgc catcttctct gtgaatttag ttctctttct ggtgactctc tggattttga aaaacagact ctcctccctc aatagtgaag tgtccaccct ccggaacaca aggatgctgg catttaaagc gacagctcag ctgttcatcc tgggctgcac gtggtgtctg ggcatcttgc aggtgggtcc ggctgcccgg gtcatggcct acctcttcac catcatcaac agcctgcagg gtgtcttcat cttcctggtg tactgcctcc tcagccagca ggtccgggag caatatggga aatggtccaa agggatcagg aaattgaaaa ctgagtctga gatgcacaca ctctccagca gtgctaaggc tgacacctcc aaacccagca cggttaacta gaaaaatctt ctgaataaga tcttccctct ttgccggtgg aaaatctgaa caatctttga gccatctaga ggggaaagaa aagactttgt tctgtgtgtt tcaagaaatt caccatgtca gcaatatgaa ggatgttatg gaaggcgtgc ttggcattca attcctgcag aaaccggaaa tcttccatgc cctgcaatgt gctcatcaaa ctctcagcat atggacggcc agctgtggcc catatcttgg tcactctgaa gcacaatatt tatgaagcta tagaacgtta agacctcttt cacagcctct ccttcctaca aagactcctc caaatcttaa aatgaagcag gaaaacaagc ctaagaggac tttcataccg acaacatctg aaaggactag aatgttcaca ccacgatctg gatttcttaa tttttgttt ttgtttttgt tgttctctag ttctacgggt ttgattattt agtcatgtga aaaatattga ttactcacac atagatcaag agagacacgg ctcctgcctt catggagctt ttaggggaaa atgaagtggc tcttgcagct agagttgact cagaagccga aattcctaga aatcaggttt ctactgctag gcaattgaag tataaactat tttataaaca ctgtcttctt tcatcttcac		
635	190948	EMR2 Hormone Receptor	NP_038475.1	MGGRVFLVFL AFCVWLTLPG AETQDSRGCA RWCPQDSSCV NATACRCNPG FSSFSEIITT PMETCDDINE CATLSKVSCG KFSDCWNTEG SYDCVCSPGY EPVSGAKTFK NESENTCQDV DECQQNPRLC KSYGTCVNTL GSYTCQCLPG FKLKPEDPKL CTDVNECTSG QNPCHSSTHC LNNVGSYQCR CRPGWQPIPG SPNGPNNTVC EDVDECSSGQ HQCDSSTVCF NTVGSYSCRC RPGWKPRHGI PNNQKDTVCE DMTFSTWTPP PGVHSQTLSR FFDKVQDLGR DYKPGLANNT IQSILQALDE LLEAPGDLET LPRLQQHCVA SHLLDGLEDV LRGLSKNLSN GLLNFSYPAG TELSLEVQKQ VDRSVTLRQN QAVMQLDWNQ AQKSGDPGPS VVGLVSIPGM GKLLAEAPLV LEPEKQMLLH ETHQGLLQDG SPILLSDVIS AFLSNNDTQN LSSPVTFTFS HRSVIPRQKV LCVFWEHGQN GCGHWATTGC STIGTRDTST ICRCTHLSSF AVLMAHYDVQ EEDPVLTVIT YMGLSVSLLC LLLAALTFLL CKAIQNTSTS LHLQLSLCLF LAHLLFLVAI DQTGHKVLCS IIAGTLHYLY LATFTWMLLE ALYLFLTARN LTVVNYSSIN RFMKKLMFPV GYGVPAVTVA ISAASRPHLY GTPSRCWLQP EKGFIWGFLG PVCAIFSVNL VLFLVTLWIL KNRLSSLNSE VSTLRNTRML AFKATAQLFI LGCTWCLGIL QVGPAARVMA YLFTIINSLQ GVFIFLVYCL LSQQVREQYG KWSKGIRKLK TESEMHTLSS SAKADTSKPS TVN	P	Homo sapiens
636	190955	Leukotriene B4 Receptor BLT1	NM_000752	gccattctct cacatcccgt gcggtcagga agcccttcct gaactctgac ttcagttctt gctgcggttt ctgcccattt ttttcatatc ctctgacagc tgcgaggtca tctctgctct ggcttttctc caagcagaac aagtgggggc tctggaaagg ttaagggacc tcagtggcca ccattatact ttgcatcttt cctgagaagt gagagttgaa agggaagcag gaaggcccat ggtcagattg aaggaaggac tttttagttt cttttttttt tttttgaaat ggagtctcgc tctgtcattc aggctggagt gcagtggtgc gatctcagct cactgcagcc tccacttcct gggttcacat gattctcctg cctcagcctc ccaagtagct gagactacag gcacatgcca	A	Homo sapiens

				ctacacccag ctaacttttg tatttttagt agagacgggg tttcaccatg ttggccaggc tggtctcaaa ctgctaacat caagtgatct gctcccctca gcctcccaaa gtgctgggat taccggtatg aaccaccaca acctgccagg aatttttagt ttttagcttt tgcaggagac ttcaaggaaa ggagacattc ctctgtccag gaaacgggta aggggaccat ttctgcattg ctggtttccc ctcttggcag ggtgggcatg aggcatcact gttcctgctc cctcactcct gctcctcatg ctcagcctgc cagctcggcc tcaactttgt gtgtctaaag tggaactgaa tagtagctgt gagaagatag gaaagaggta gtgccaatct ccttgcccag atcataaatc cagactcagc agggtaacca catgggcaag cacaaggtag gtgcttgggg aaaggggaag taattggcat tctgtgtgat accaaggaga ccatttggat tttggcttct accaaagaga atggagaatt ggttgaccta aatggaacca gtccctttaa gtaaggggag gaaagggggt gctggaagat ggccctcttc ccaccaccta gatcatagct tgaactgaag ccaaggacag agtgctgccc ccttcggcat ttactgatgt gccctcttta aatcatgatg ttatctaacc caaacccaga cccaggacct agtcacagct ccaacctaca cttcctatta atcttaaaac aaagcgaaac aaacacaaaa agatatcagc attgtagcct ccaatctgag cccatttccc ttctctggct accatacctc cttctcctat atgataccat tcactacttt gttcaattat ccagtctaga cctgcatctt gaggccacac ccagccttct cactccccac acccctcttt cctctctcac tgctccttcc tggtctcttc tcatctggcc ccacctctaa ggagtcctcc tgccttctgg gttgccctgg aaaacagact atcccccctc ctagtgaagg gagtgggtag gggtttcagc cccaccctca ggaagatgcg tcttccctgt cctctgctct gtggtacttc ctctctggct gatttagcaa acagcaccta gacctggggc caggcctttg gcagtgggac agatccaggg ataggctaca ccaccctgcc ctgaccctgg gattggcatc agcttccaac cagttcctgc caaagcttgt aagtcctccc gacggccatg aacactacat cttctgcagc acccccctca ctaggtgtag agttcatctc tctgctggct atcatcctgc tgtcagtggc gctggctgtg gggcttcccg gcaacagctt tgtggtgtgg agtatcctga aaaggatgca gaagcgctct gtcactgccc tgatggtgct gaacctggcc ctggccgacc tggccgtatt gctcactgct cccttttccc ttcacttcct ggcccaaggc acctggagtt ttggactggc tggttgccgc ctgtgtcact atgtctgcgg agtcagcatg tacgccagcg tcctgcttat cacggccatg agtctagacc gctcactggc ggtggcccgc ccctttgtgt cccagaagct acgcaccaag gcgatggccc ggcgggtgct ggcaggcatc tgggtgttgt cctttctgct ggccacaccc gtcctcgcgt accgcacagt agtgccctgg aaaacgaaca tgagcctgtg cttcccgcgg taccccagcg aagggcaccg ggccttccat ctaatcttcg aggctgtcac gggcttcctg ctgcccttcc tggctgtggt ggccagctac tcggacatag ggcgtcggct acaggcccgg cgcttccgcc gcagccgccg caccggccgc ctggtggtgc tcatcatcct gaccttcgcc gccttctggc tgccctacca cgtggtgaac ctggctgagg cgggccgcgc gctggccggc caggccgccg ggttagggct cgtggggaag cggctgagcc tggcccgcaa cgtgctcatc gcactcgcct tcctgagcag cagcgtgaac cccgtgctgt acgcgtgcgc cggcggcggc ctgctgcgct cggcgggcgt gggcttcgtc gccaagctgc tggagggcac gggttccgag gcgtccagca cgcgccgcgg gggcagcctg ggccagaccg ctaggagcgg ccccgccgct ctggagcccg gcccttccga gagcctcact gcctccagcc ctctcaagtt aaacgaactg aactaggcct ggtggaagga ggcgcacttt cctcctggca gaatgctagc tctgagccag ttcagtacct ggaggaggag caggggcgtg gagggcgtgg agggcgtggg agcgtgggag gcgggagtgg agtggaagaa gagggagaga tggagcaaag tgagggccga gtgagagcgt gctccagcct ggctcccaca ggcagcttta accattaaaa ctgaagtctg aa		
637	190955	Leukotriene B4 Receptor BLT1	NP_000743.1	MNTTSSAAPP SLGVEFISLL AIILLSVALA VGLPGNSFVV WSILKRMQKR SVTALMVLNL ALADLAVLLT APFFLHFLAQ GTWSFGLAGC RLCHYVCGVS MYASVLLITA MSLDRSLAVA RPFVSQKLRT KAMARRVLAG IWVLSFLLAT PVLAYRTVVP WKTNMSLCFP RYPSEGHRAF HLIFEAVTGF LLPFLAVVAS YSDIGRRLQA RRFRRSRRTG RLVVLIILTF AAFWLPYHVV NLAEAGRALA GQAAGLGLVG KRLSLARNVL IALAFLSSSV NPVLYACAGG GLLRSAGVGF VAKLLEGTGS EASSTRRGGS LGQTARSGPA ALEPGPSESL TASSPLKLNE LN	P	Homo sapiens
638	191039	Trace Amine	AF380185	atgatgccct tttgccacaa tataattaat atttcctgtg tgaaaaacaa ctggtcaaat gatgtccgtg cttccctgta cagtttaatg	A	Homo

		Receptor 1 (TA1)		gtgctcataa ttctgaccac actcgttggc aatctgatag ttattgtttc tatatcacac ttcaaacaac ttcatacccc aacaaattgg ctcattcatt ccatggccac tgtggacttt cttctggggt gtctggtcat gccttacagt atggtgagat ctgctgagca ctgttggtat tttggagaag tcttctgtaa aattcacaca agcaccgaca ttatgctgag ctcagcctcc attttccatt tgtctttcat ctccattgac cgctactatg ctgtgtgtga tccactgaga tataaagcca agatgaatat cttggttatt tgtgtgatga tcttcattag ttggagtgtc cctgctgttt ttgcatttgg aatgatcttt ctggagctaa acttcaaagg cgctgaagag atatattaca aacatgttca ctgcagagga ggttgctctg tcttctttag caaaatatct ggggtactga cctttatgac ttctttttat atacctggat ctattatgtt atgtgtctat tacagaatat atcttatcgc taaagaacag gcaagattaa ttagtgatgc caatcagaag ctccaaattg gattggaaat gaaaaatgga atttcacaaa gcaaagaaag gaaagctgtg aagacattgg ggattgtgat gggagttttc ctaatatgct ggtgcccttt ctttatctgt acagtcatgg accctttttct tcactacatt attccaccta ctttgaatga tgtgttgatt tggtttggct acttgaactc tacatttaat ccaatggttt atgcattttt ctatccttgg tttagaaaag cactgaagat gatgctgttt ggtaaaattt tccaaaaaga ttcatccagg tgtaaattat ttttggaatt gagttcatag		sapiens
639	191039	Trace Amine Receptor 1 (TA1)	AAK71236.1	MMPFCHNIIN ISCVKNNWSN DVRASLYSLM VLIILTTLVG NLIVIVSISH FKQLHTPTNW LIHSMATVDF LLGCLVMPYS MVRSAEHCWY FGEVFCKIHT STDIMLSSAS IFHLSFISID RYYAVCDPLR YKAKMNILVI CVMIFISWSV PAVFAFGMIF LELNFKGAEE IYYKHVHCRG GCSVFFSKIS GVLTFMTSFY IPGSIMLCVY YRIYLIAKEQ ARLISDANQK LQIGLEMKNG ISQSKERKAV KTLGIVMGVF LICWCPFFIC TVMDPFLHYI IPPTLNDVLI WFGYLNSTFN PMVYAFFYPW FRKALKMMLF GKIFQKDSSR CKLFLELSS	P	Homo sapiens
640	191132	G Protein-Coupled Receptor 88 (GPR88)	NM_022049	gggttccaca tcagccacca ctcctgcttc tgagcacagg gtgctctcct cttgagctca gcttctgatt ttgcagccaa gcattcttgc tgctgctgcc tgcctgccca cccgcctggg cttgcagccc gccactttac tttctccagc cctgatacca gctgagaagt ctccctgcag ctgctagttc ctgcccagga ccatgtgtgt ggatgctgct tgggagaagc gggcacttgc tcctggcact gatcccagct gagtttctcc tgttgatttc tggaccactg atgctgttgc tgaggaggta tttcctggca tccctccccc tgagacaccg gctaaggacc agcctaaacg caaggcagga cagtgtcagg atggaccgcg ctgccagaag ccgacgctag cgagggaggt gtgaagagtt ggccagaatg accaactcct cctccacatc cacctcctcc accaccggtg gctcgctgct gctgctctgc gaggaagagg agtcgtgggc gggccggcgc atcccggtgt cactcctgta ttcgggcctg gccatcgggg gcacgctggc caacggcatg gtcatctatc tcgtgtcgtc cttccgaaag ctgcagacca ccagcaacgc cttcattgtg aacggctgcg ccgccgacct cagcgtctgc gccctctgga tgccgcagga ggcggtgctc gggctcctgc ccaccggctc tgcggagccc cccgcagact gggacggcgc tgggggcagc taccgcctgc tacggggtgg gctgctgggc ctcggactca cggtgtccct cctctcccac tgcctcgtgg ccctgaaccg ctacctgctc atcacccggg cgcccgccac ctaccaggcg ctgtaccaga ggcgccacac ggcgggcatg ctggcgctgt cctgggcgct cgccctgggc ctcgtgctgc tgctcccgcc ctgggcaccg cggcccggcg ccgcgccacc gcgaatccac tacccggcgc tgctggccgc cgcggcgctg ctggcgcaga cagctctgct gctgcactgc tacctgggca tcgtgcgccg cgtgcgtgtc agcgtcaagc gggtcagcgt gctcaacttc cacctgctgc accagttgcc cggctgcgcc gccgccgccg ccgccttccc gggcgcccag cacgcgccgg gccccggtgg cgccgcgcac ccggcgcagg cccagcccct gccgcccgcg ctgcacccgc ggcgggcaca gcggcgtctc agcggcctgt cggtgctgct gctctgctgc gtcttcctgc tggccacgca gccactggtg tgggtgagcc tggccagcgg cttctcgctg ccggtgccct ggggagtgca cgcggccagc tggctcctgt gctgcgccct gtccgcgctc aacccgctgc tctacacgtg gaggaacgag gagttccgcc gctccgtgcg ctcagtcctg ccgggcgtcg gcgacgcggc ggccgctgcc gttgccgcca cagccgtgcc cgcagtgtcc caggcgcaac tgggcacccg cgccgcgggc cagcactggt aacctagccg gggcccgagg gaagcggaga tcccggctt ccgacgtcct tgggcaccgt cgcctccttc cctcctaggg catcccctgc ctgaacgaag acttccgccg cgaagcccga tagatcgggg gaaaatgggg ccttcgaccc cagcgggcta cctgaaccaa ggcgtctctc taagtggggc	A	Homo sapiens

				gcccgaagtc atttggacg gccacctgat ttttaccctt tgtttctgtg ttttagagga atcctaaagt caaaacacca gagacttgaa gaacttgcaa actggcgttt taaaataacc ggttaattta tttccacaca gtttgttttt gaaaaagagc tttcataatg tataaccctt tccactttca tcgtcttata tatgaagcgc cttgagtgtg catgaaccaa aggaaataac attgaagaag gaaaacaata tgtagaaagt attttagaaa gtaacctgtc tttgatgatg cttctcttac catttagttt ttgtatatta ccctggggca gtgaagccct aggtgtgccc accagtatga gttgccatta agacctcaag ccctttattc ttaaagggt ttttaataaa gtctttctca aatgaggtag aatcttagcc agtgagaaaa aaaattattt tatgctcctt tttttcgca ctcttaagac tgaaaattgg cgttgagtgt tatagtgaaa attttccagt ttgataattg atggtcagag ccagcactgg aattttgaaa acaaataagg tgattatcta ttttaggtac cgtttcacat tttctatagc atgcacactt gttgctaccc tcatttttgta accaatttat ttgccttatg aatgtgattg cagctttgaa cattctgtac tgtaatggtt gctaagaaga ataagtcctt ctgttttctc tttaacattt aaaatatctc aatgcacatg atataattaa acactaataa taccatgact gcatagctaa tattagctgc tattgcatgc tcctagatgc tagaacttat tgggcatgtg gtatactgaa gcgatacccg ttagacaagg atattttact tcttccagac accagaagaa atggccttca attatttgaa aagagacaca gagacacctc tggctaccta gagttcttcc tgtcttgacc aatttatgag aaagctccca gttgggactt tatctcacaa gtggaatcac agtcaagacg gatcaataat atggttggct cagcaaagcc agctgtgctc ttttagggtt taaacaagcc acacgttaga aagcaacact gtttttatgt agttcatata tattaccacg acatttaaca tcaatattgt atatgttgaa ggaggtataa taaactcagt catatatagt gaacagttca aatgggaaag tgttctaaaa catattattt gaggtttgtc atattcatct ttggtttact aaatttactt agaaatattt gaaatgcaaa attgtgtgaa atcaccttat caaattaaaa tgggaagaaa gtaattttaa taatttttaa taatcatatg tcagcattct gactacttac cacatcaaat ctgggcccaa acagcctcag ttaactgcat aattcaggaa caaaaccagc ttgctttgtt gcacgcctgg gcaatttcag ccaggacatt aggaccactt gttgtacatc tgaataatta tggaagttgg gacatgttaa ggaaaacaaa tatgttcatc accaacaatc agctgtcatt ttattaatct atccctttttg tgcatgcacc atttctctct tactaacagt ttcatctgtt cacattttcc ttgattcaaa tattaaagtt cagaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa		
641	191132	G Protein-Coupled Receptor 88 (GPR88)	NP_071332.1	MTNSSSTSTS STTGGSLLLL CEEEESWAGR RIPVSLLYSG LAIGGTLANG MVIYLVSSFR KLQTTSNAFI VNGCAADLSV CALWMPQEAV LGLLPTGSAE PPADWDGAGG SYRLLRGGLL GLGLTVSLLS HCLVALNRYL LITRAPATYQ ALYQRRHTAG MLALSWALAL GLVLLLPPWA PRPGAAPPRI HYPALLAAAA LLAQTALLLH CYLGIVRRVR VSVKRVSVLN FHLLHQLPGC AAAAAAFPGA QHAPGPGGAA HPAQAQPLPP ALHPRRAQRR LSGLSVLLLC CVFLLATQPL VWVSLASGFS LPVPWGVHAA SWLLCCALSA LNPLLYTWRN EEFRRSVRSV LPGVGDAAAA AVAATAVPAV SQAQLGTRAA GQHW	P	Homo sapiens
642	191168	P2Y12 Platelet ADP Receptor	NM_022788	ggctgcaata actactactt actggataca ttcaaaccct ccagaatcaa cagttatcag gtaaccaaca agaaatgcaa gccgtcgaca acctcacctc tgcgcctggg aacaccagtc tgtgcaccag agactacaaa atcacccagg tcctcttccc actgctctac actgtcctgt ttttgttgg acttatcaca aatggcctgg cgatgaggat tttctttcaa atccggagta aatcaaactt tattattttt cttaagaaca cagtcatttc tgatcttctc atgattctga cttttccatt caaaattctt agtgatgcca aactgggaac aggaccactg agaacttttg tgtgtcaagt tacctccgtc atattttatt tcacaatgta tatcagtatt tcattcctgg gactgataac tatcgatcgc taccagaaga ccaccaggcc atttaaaaca tccaaccccca aaaatctctt gggggctaag attctctctg ttgtcatctg ggcattcatg ttcttactct ctttgcctaa catgattctg accaacaggc agccgagaga caagaatgtg aagaaatgct ctttccttaa atcagagttc ggtctagtct ggcatgaaat agtaaattac atctgtcaag tcattttctg gattaatttc ttaattgtta ttgtatgtta tacactcatt acaaaagaac tgtaccggtc atacgtaaga acgaggggtg taggtaaagt ccccaggaaa aaggtgaacg tcaaagtttt cattatcatt gctgtattct ttatttgttt tgttcctttc cattttgccc gaattcctta caccctgagc caaacccggg atgtctttga ctgcactgct gaaaatactc tgttctatgt gaaagagagc actctgtggt taacttcctt aaatgcatgc ctggatccgt tcatctattt tttcctttgc aagtccttca gaaattcctt gataagtatg ctgaagtgcc ccaattctgc aacatctctg tcccaggaca	A	Homo sapiens

				ataggaaaaa agaacaggat ggtggtgacc caaatgaaga gactccaatg taaacaaatt aactaaggaa atatttcaat ctctttgtgt tcagaactcg ttaaagcaaa gcgctaagta aaaatattaa ctgacgaaga agcaactaag ttaataataa tgactctaaa gaaacagaag attacaaaag caattttcat ttacctttcc agtatgaaaa gctatcttaa aatatagaaa actaatctaa actgtagctg tattagcagc aaaacaaacg ac		
643	191168	P2Y12 Platelet ADP Receptor	NP_073625.1	MQAVDNLTSA PGNTSLCTRD YKITQVLFPL LYTVLFFVGL ITNGLAMRIF FQIRSKSNFI IFLKNTVISD LLMILTFPFK ILSDAKLGTG PLRTFVCQVT SVIFYFTMYI SISFLGLITI DRYQKTTRPF KTSNPKNLLG AKILSVVIWA FMFLLSLPNM ILTNRQPRDK NVKKCSFLKS EFGLVWHEIV NYICQVIFWI NFLIVIVCYT LITKELYRSY VRTRGVGKVP RKKVNVKVFI IIAVFFICFV PFHFARIPYT LSQTRDVFDC TAENTLFYVK ESTLWLTSLN ACLDPFIYFF LCKSFRNSLI SMLKCPNSAT SLSQDNRKKE QDGGDPNEET PM	P	Homo sapiens
644	191193	Trace Amine Receptor 3 (TA3)	AF380189	atggtgaata atttctccca agctgaggct gtggagctgt gttacaagaa cgtgaacgaa tcctgcatta aaactcctta ctcgccaggt cctcgatcta tcctctacgc cgtccttggt tttggggctg tgctggcagc gtttggaaac ttactggtca tgattgctat ccttcacttc aaacaactgc acacacctac aaactttctg attgcgtcgc tggcctgtgc tgacttcttg gtgggagtca ctgtgatgcc cttcagcaca gtgaggtctg tggagagctg ttggtacttt ggggacagtt actgtaaatt ccatacatgt tttgacacat ccttctgttt tgcttcttta tttcatttat gctgtatctc tgttgataga tacattgctg ttactgatcc tctgacctat ccaaccaagt ttactgtgtc agtttcaggg atatgcattg ttctttcctg gttcttttct gtcacataca gcttttcgat cttttacacg ggagccaacg aagaaggaat tgaggaatta gtagttgctc taacctgtgt aggaggctgc caggctccac tgaatcaaaa ctgggtccta ctttgttttc ttctattctt tatacccaat gtcgccatgg tgtttatata cagtaagata tttttggtgg ccaagcatca ggctaggaag atagaaagta cagccagcca agctcagtcc tcctcagaga gttacaagga aagagtagca aaaagagaga gaaaggctgc caaaaccttg ggaattgcta tggcagcatt tcttgtctct tggctaccat acctcgttga tgcagtgatt gatgcttata tgaattttat aactcctcct tatgtttatg agattttagt ttggtgtgtt tattataatt cagctatgaa ccccttgatt tatgctttct tttaccaatg gtttgggaag gcaataaaac ttattgtaag cggcaaggtc ttaaggactg attcgtcaac aactaattta ttttctgaag aagtagagac agattaa	A	Homo sapiens
645	191193	Trace Amine Receptor 3 (TA3)	AAK71240.1	MVNNFSQAEA VELCYKNVNE SCIKTPYSPG PRSILYAVLG FGAVLAAFGN LLVMIAILHF KQLHTPTNFL IASLACADFL VGVTVMPFST VRSVESCWYF GDSYCKFHTC FDTSFCFASL FHLCCISVDR YIAVTDPLTY PTKFTVSVSG ICIVLSWFFS VTYSFSIFYT GANEEGIEEL VVALTCVGGC QAPLNQNWVL LCFLLFFIPN VAMVFIYSKI FLVAKHQARK IESTASQAQS SSESYKERVA KRERKAAKTL GIAMAAFLVS WLPYLVDAVI DAYMNFITPP YVYEILVWCV YYNSAMNPLI YAFFYQWFGK AIKLIVSGKV LRTDSSTTNL FSEEVETD	P	Homo sapiens
646	191196	G Protein-Coupled Receptor GPR80	AF411109	atgaatgagc cactagacta tttagcaaat gcttctgatt tccccgatta tgcagctgct tttggaaatt gcactgatga aaacatccca ctcaagatgc actacctccc tgttatttat ggcattatct tcctcgtggg atttccaggc aatgcagtag tgatatccac ttacattttc aaaatgagac cttggaagag cagcaccatc attatgctga acctggcctg cacagatctg ctgtatctga ccagcctccc cttcctgatt cactactatg ccagtggcga aaactggatc tttggagatt tcatgtgtaa gtttatccgc ttcagcttcc atttcaacct gtatagcagc atcctcttcc tcacctgttt cagcatcttc cgctactgtg tgatcattca cccaatgagc tgcttttcca ttcacaaaac tcgatgtgca gttgtagcct gtgctgtggt gtggatcatt tcactggtag ctgtcattcc gatgaccttc ttgatcacat caaccaacag gaccaacaga tcagcctgtc tcgacctcac cagttcggat gaactcaata ctattaagtg gtacaacctg attttgactg caactacttt ctgcctcccc ttggtgatag tgacactttg ctataccacg attatccaca ctctgaccca tggactgcaa actgacagct gccttaagca gaaagcacga aggctaacca ttctgctact ccttgcattt tacgtatgtt ttttaccctt ccatatcttg agggtcattc ggatcgaatc tcgcctgctt tcaatcagtt gttccattga gaatcagatc catgaagctt acatcgtttc tagaccatta gctgctctga acacctttgg	A	Homo sapiens

				taacctgtta ctatatgtgg tggtcagcga caactttcag caggctgtct gctcaacagt gagatgcaaa gtaagcggga accttgagca agcaaagaaa attagttact caaacaaccc ttga		
647	191196	G Protein-Coupled Receptor GPR80	CAC51133.1	MNEPLDYLAN ASDFPDYAAA FGNCTDENIP LKMHYLPVIY GIIFLVGFPG NAVVISTYIF KMRPWKSSTI IMLNLACTDL LYLTSLPFLI HYYASGENWI FGDFMCKFIR FSFHFNLYSS ILFLTCFSIF RYCVIIHPMS CFSIHKTRCA VVACAVVWII SLVAVIPMTF LITSTNRTNR SACLDLTSSD ELNTIKWYNL ILTATTFCLP LVIVTLCYTT IIHTLTHGLQ TDSCLKQKAR RLTILLLLAF YVCFLPFHIL RVIRIESRLL SISCSIENQI HEAYIVSGPL AALNTFGNLL LYVVVSDNFQ QAVCSTVRCK VSGNLEQAKK ISYSNNP	P	Homo sapiens
648	191218	MrgX2 G Protein-Coupled Receptor	AY042214	tccctggccc ttaataaatg acttaatctc ttcaagcctc tgatttcctc tcctgtaaaa caggggcggt aattaccaca taacaggctg gtcatgaaaa tcagtgaaca tgcagcaggt gctcaagtct tgtttttgtt tccaggggca ccagtggagg ttttctgagc atggatccaa ccacccccggc ctggggaaca gaaagtacaa cagtgaatgg aaatgaccaa gcccttcttc tgctttgtgg caaggagacc ctgatcccgg tcttcctgat ccttttcatt gccctggtcg ggctggtagg aaacgggttt gtgctctggc tcctgggctt ccgcatgcgc aggaacgcct tctctgtcta cgtcctcagc ctggccgggg ccgacttcct cttcctctgc ttccagatta taaattgcct ggtgtacctc agtaacttct tctgttccat ctccatcaat ttccctagct tcttcaccac tgtgatgacc tgtgcctacc ttgcaggcct gagcatgctg agcaccgtca gcaccgagcg ctgcctgtcc gtcctgtggc ccatctggta tcgctgccgc cgccccagac acctgtcagc ggtcgtgtgt gtcctgctct gggccctgtc cctactgctg agcatcttgg aagggaagtt ctgtggcttc ttatttagtg atggtgactc tggttggtgt cagacatttg atttcatcac tgcagcgtgg ctgatttttt tattcatggt tctctgtggg tccagtctgg ccctgctggt caggatcctc tgtggctcca ggggtctgcc actgaccagg ctgtacctga ccatcctgct cacagtgctg gtgttcctcc tctgcggcct gccctttggc attcagtggt tcctaatatt atggatctgg aaggattctg atgtcttatt ttgtcatatt catccagttt cagttgtcct gtcatctctt aacagcagtg ccaaccccat catttacttc ttcgtgggct cttttaggaa gcagtggcgg ctgcagcagc cgatcctcaa gctggctctc cagagggctc tgcaggacat tgctgaggtg gatcacagtg aaggatgctt ccgtcagggc accccggaga tgtcgagaag cagtctggtg tagagatgga cagcctctac ttccatcaga tatatgtggc tttgagaggc aactttgccc ctgtctgtct gatttgctga actttctcag tcctgatttt aaaacagtta agagagtcct tgtgaggatt aagtgagaca	A	Homo sapiens
649	191218	MrgX2 G Protein-Coupled Receptor	AAK91805.1	MDPTTPAWGT ESTTVNGNDQ ALLLLCGKET LIPVFLILFI ALVGLVGNGF VLWLLGFRMR RNAFSVYVLS LAGADFLFLC FQIINCLVYL SNFFCSISIN FPSFFTTVMT CAYLAGLSML STVSTERCLS VLWPIWYRCR RPRHLSAVVC VLLWALSLLL SILEGKFCGF LFSDGDSGWC QTFDFITAAW LIFLFMVLCG SSLALLVRIL CGSRGLPLTR LYLTILLTVL VFLLCGLPFG IQWFLILWIW KDSDVLFCHI HPVSVVLSSL NSSANPIIYF FVGSFRKQWR LQQPILKLAL QRALQDIAEV DHSEGCFRQG TPEMSRSSLV	P	Homo sapiens
650	191222	G Protein-Coupled Receptor Ls191222	LG94359	tcatatactt gacattcttt ttcgaggcaa agttttagat acacttgtgg catttccct gcatatgtgt gcaaatgctt gtgcctgaag atctttgctt ttctgccagg ttgcagactt gccactagag ctgggattgg tcattgtgac attgccgctc atggagtcca gtgaagcagg actcagggca atgctgctca cactatggga agaataactg tagatcatct tgagaaaggc agactttgtg ttaatctctt gcttacaaat aataacatag catttgggga tgaatgtgca atacaggatt ccatagttag atattaatat gacaataatc tccacagctg gtacatattt gccaaatgtg gtagcataga tagggatgaa tgtgatccaa gctatgaagt aaatgagcat gccaaatgta atgaatttgg cttcattgta attctcatat ttgcctttga aagcaaatat gaagcaaatg aaggccagga tggcaatgta gcccagcatg gtgccaaatg caagtatgga tccctcctca cactccagga tgatgactct gggcaaggag acattcacct ctacagtagg tgctgcaaag attagccaga gtgtgcaaat gacaacctgg atgcccgtgc aagtgaagat aataaggatc ggtctataga ggcacttcag aaatttctgt aatttgggat caaagctgaa ggctagcaaa attttcagag acttcgtcaa aatgcaggag atgcaaagag taaagctcac tccaaacatt gtctgcctgg ttttacatgt gaagtcttgt ggttctccaa tgaaaaagct cgtgctggca	A	Homo sapiens

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651	191222	G Protein-Coupled Receptor Ls191222	ENSP00000199719	QTLAMIHSIE MINNSTLLPG VKLGYEIYDT CTEVTVAMAA TLRFLSKFNC SRETVEFKCD YSSYMPRVKA VIGSGYSEIT MAVSRMLNLQ LMPQVGYEST AEILSDKIRF PSFLRTVPSD FHQIKAMAHL IQKSGWNWIG IITTDDDYGR LALNTFIIQA EANNVCIAFK EVLPAFLSDN TIEVRINRTL KKIILEAQVN VIVVFLRQFH VFDLFNKAIE MNINKMWIAS DNWSTATKIT TIPNVKKIGK VVGFAFRRGN ISSFHSFLQN LHLLPSDSHK LLHEYAMHLS ACAYVKDTDL RLIHSIQLAV FALGYAIRDL CQARDCQNPN AFQPWELLGV LKNVTFTDGW NSFHFDAHGD LNTGYDVVLW KEINGHMTVT KMAEYDLQND VFIIPDQETK NEFRNLKQIQ SKCSKECSPG QMKKTTRSQH ICCYECQNCP ENHYTNQTDM PHCLLCNNKT HWAPVRSTMC FEKEVEYLNW NDSLAILLLI LSLLGIIFVL VVGIIFTRNL NTPVVKSSGG LRVCYVILLC HFLNFASTSF FIGEPQDFTC KTRQTMFGVS FTLCISCILT KSLKILLAFS FDPKLQKFLK CLYRPILIIF TCTGIQVVIC TLWLIFAAPT VEVNVSLPRV IILECEEGSI LAFGTMLGYI AILAFICFIF AFKGKYENYN EAKFITFGML IYFIAWITFI PIYATTFGKY VPAVEIIVIL ISNYGILYCT FIPKCYVIIC KQEINTKSAF LKMIYSYSSH SVSSI	P	Homo sapiens
652	193511	EGF-Like Module-Containing Mucin-Like Receptor EMR3	NM_032571	tttcttgagc taggaaaggt ggttggctta cggcacagta gagagcttcc agggctggct ggcgtgggat acccgtacca cagaaatgca gggaccattg cttcttccag gcctctgctt tctgctgagc ctctttggag ctgtgactca gaaaaccaaa acttcctgtg ctaagtgccc cccaaatgct tcctgtgtca ataacactca ctgcacctgc aaccatggat atacttctgg atctgggcag aaactattca cattcccctt ggagacatgt aacgacatta atgaatgtac accaccctat agtgtatatt gtggatttaa cgctgtgtgt tacaatgtcg aaggaagttt ctactgtcaa tgtgtcccag gatatagact gcattctggg aatgaacaat tcagtaattc caatgagaac acctgtcagg acaccacctc ctcaaagaca accgagggca ggaaagagct gcaaaagatt gtggacaaat ttgagtcact tctcaccaat cagactttat ggagaacaga agggagacaa gaaatctcat ccacagctac cactattctc cgggatgtgg aatcgaaagt tctagaaact gccttgaaag atccagaaca aaaagtcctg aaaatccaaa acgatagtgt agctattgaa actcaagcga ttacagacaa ttgctctgaa gaaagaaaga cattcaactt gaacgtccaa atgaactcaa tggacatccg ttgcagtgac atcatccagg gagacacaca aggtcccagt gccattgcct ttatctcata ttcttctctt ggaaacatca taaatgcaac ttttttgaa gagatggata agaaagatca agtgtatctg aactctcagg ttgtgagtgc tgctattgga cccaaaagga acgtgtctct ctccaagtct gtgacgctga ctttccagca cgtgaagatg acccccagta ccaaaaaggt cttctgtgtc tactggaaga gcacagggca gggcagccag tggtccaggg atggctgctt cctgatacac gtgaacaaga gtcacaccat gtgtaattgc agtcacctgt ccagcttcgc tgtcctgatg gccctgacca gccaggagga ggatcccgtg ctgactgtca tcacctacgt ggggctgagc gtctctctgc tgtgcctcct cctggcggcc ctcacttttc tcctgtgtaa agccatccag aacaccagca cctcactgca tctgcagctc tcgctctgcc tcttcctggc ccacctcctc ttcctcgtgg ggattgatcg aactgaaccc aaggtgctgt gctccatcat cgccggtgct ttgcactatc tctacctggc cgccttcacc tggatgctgc tggagggtgt gcacctcttc ctcactgcac ggaacctgac agtggtcaac tactcaagca tcaatagact catgaagtgg atcatgttcc cagtcggcta tggcgttccc gctgtgactg tggccatttc tgcagcctcc tggcctcacc tttatggaac tgctgatcga tgctggctcc acctggacca gggattcatg tggagtttcc ttggcccagt ctgtgccatt ttctctgcga atttagtatt gtttatcttg gtcttttgga ttttgaaaag aaaactttcc tccctcaata gtgaagtgtc aaccatccag aacacaagga tgctggcttt caaagcaaca gctcagctct tcatcctggg ctgcacatgg tgtctgggct tgctacaggt gggtccagct gcccaggtca tggcctacct cttcaccatc	A	Homo sapiens

				atcaacagcc tccaaggctt cttcatcttc ttggtctact gcctcctcag ccagcaggtc cagaaacaat atcaaaagtg gtttagagag atcgtaaaat caaaatctga gtctgagaca tacacacttt ccagcaagat gggtcctgac tcaaaaccca gtgaggggga tgtttttcca ggacaagtga agagaaaata ttaaaactag aatattcaac tccatatgga aaatcatatc catggatctc tttggcatta tgaagaatga agctaaggaa aagggaattc attaaacata tcatccttgg agaggaagta atcaaccttt acttcccaag ctgtttgttc tccacaatag gctctcaaca aatgtgtggt aaattgcatt tctcttcaaa aaaaaaa		
653	193511	EGF-Like Module-Containing Mucin-Like Receptor EMR3	NP_115960.1	MQGPLLLPGL CFLLSLFGAV TQKTKTSCAK CPPNASCVNN THCTCNHGYT SGSGQKLFTF PLETCNDINE CTPPYSVYCG FNAVCYNVEG SFYCQCVPGY RLHSGNEQFS NSNENTCQDT TSSKTTEGRK ELQKIVDKFE SLLTNQTLWR TEGRQEISST ATTILRDVES KVLETALKDP EQKVLKIQND SVAIETQAIT DNCSEERKTF NLNVQMNSMD IRCSDIIQGD TQGPSAIAFI SYSSLGNIIN ATFFEEMDKK DQVYLNSQVV SAAIGPKRNV SLSKSVTLTF QHVKMTPSTK KVFCVYWKST GQGSQWSRDG CFLIHVNKSH TMCNCSHLSS FAVLMALTSQ EEDPVLTVIT YVGLSVSLLC LLLAALTFLL CKAIQNTSTS LHLQLSLCLF LAHLLFLVGI DRTEPKVLCS IIAGALHYLY LAAFTWMLLE GVHLFLTARN LTVVNYSSIN RLMKWIMFPV GYGVPAVTVA ISAASWPHLY GTADRCWLHL DQGFMWSFLG PVCAIFSANL VLFILVFWIL KRKLSSLNSE VSTIQNTRML AFKATAQLFI LGCTWCLGLL QVGPAAQVMA YLFTIINSLQ GFFIFLVYCL LSQQVQKQYQ KWFREIVKSK SESETYTLSS KMGPDSKPSE GDVFPGQVKR KY	P	Homo sapiens
654	193516	G Protein-Coupled Receptor dJ402H5.1	CAC21687.1	KHAYICLAAI WAYASFWTTM PLVGLGDYVP EPFGTSCTLD WWLAQASVGG QVFILNILFF CLLLPTAVIV FSYVKIIAKV KSSSKEVAHF DSRIHSSHVL EMKLTKVAML ICAGFLIAWI PYAVVSVWSA FGRPDSIPIQ LSVVPTLLAK SAAMYNPIIY QVIDYKFACC QTGGLKATKK KSLEGFRLHT VTTVRKSSAV LEIHEEV	P	Homo sapiens
655	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NM_001407	agcgaaccat cggggcggcc gggagccatg ttggagcggc gggaggcggc agcagcgtcg gggatgctgt ggtgggggcg gaaaaagcca gggccgcacg ccggaggggc tccggccgcg gagtagatgg tgcccagagg gcggcggggg tgcggagaga caggcggagg ggcgggggcc cggggcggcg gcaggggccc gggagggggc ccgagcggcg gggccagccc aaggcccgga ccggggcggg gggcggtgga ggccgtgcag ggaggcggga gatgatggcg aggcggccgc cgtggcgggg cctcggggaa cggtcgaccc ccatactcct gctccttctc ctctctttgt tccccctcag ccaggaggag ctggggggcg gtgggcacca gggctgggac ccaggcttag ctgccactac ggggccaagg gcgcatatcg gtggcggagc cttagctctt tgtccggagt cttccggggt ccgggaggat ggggggcctg gcctgggggt cagggagcct atcttcgtgg ggctccgagg gagaaggcaa agcgcccgga atagtcgagg gccccctgag cagccgaatg aggagctggg gattgaacac ggcgtccagc cattggcag ccgcgaacga gagacaggac agggaccagg gtctgtgtta tactggcgcc cagaggtctc ctcttgcggg cggacaggac ctttgcaaag aggtagtctg tcaccagggg ctctgtcctc aggggtcccg ggctcgggga acagctcgcc cctcccttca gactttttga ttcggcacca cggtcccaag ccggtgtcct cccagcggaa cgctgggaca ggctcccgca aaagagtggg caccgcgcgc tgctgtgggg aattatgggc aacagggagc aagggtcagg gcgagagagc cacgacatcc ggagcagaaa ggacagcccc ccggcggaac tgtcttccag gggcctcggg atctggcccc gagctggatt cagcaccacg cacggcgagg acagctcctg catcaggttc agcaccccgc gagtctcgga cagctcccga gccggcgccc aagcgcatgc gctcccgggg tctcttccgc tgccgcttcc tcccgcagcg ccccggccg cgtcccccgg gactcccggc ccgtcctgaa gccaggaaag taacctcggc gaaccgggca cgctttcgtc gcgccgcaaa ccgccacccg cagtttccgc agtacaacta ccagacgctg gtgccggaga atgaggcagc aggcaccgcg gtgctacgcg tggttgctca ggacccggac gccggcgagg ccgggcgcct agtctactcg ctggcggcac tcatgaacag ccgctcgctg gagctgttca gcatcgaccc	A	Homo sapiens

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656	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	MMARRPPWRG LGERSTPILL LLLLSLFPLS QEELGGGGHQ GWDPGLAATT GPRAHIGGGA LALCPESSGV REDGGPGLGV REPIFVGLRG RRQSARNSRG PPEQPNEELG IEHGVQPLGS RERETGQGPG SVLYWRPEVS SCGRTGPLQR GSLSPGALSS GVPGSGNSSP LPSDFLIRHH GPKPVSSQRN AGTGSRKRVG TARCCGELWA TGSKGQGERA TTSGAERTAP RRNCLPGASG SGPELDSAPR TARTAPASGS APRESRTAPE PAPKRMRSRG LFRCRFLPQR PGPRPPGLPA RPEARKVTSA NRARFRRAAN RHPQFPQYNY QTLVPENEAA GTAVLRVVAQ DPDAGEAGRL VYSLAALMNS RSLELFSIDP QSGLIRTAAA LDRESMERHY LRVTAQDHGS PRLSATTMVA VTVADRNDHS PVFEQAQYRE TLRENVEEGY PILQLRATDG DAPPNANLRY RFVGPPAARA AAAAAFEIDP RSGLISTSGR VDREHMESYE LVVEASDQGQ EPGPRSATVR VHITVLDEND NAPQFSEKRY VAQVREDVRP HTVVLRVTAT DRDKDANGLV HYNIISGNSR GHFAIDSLTG EIQVVAPLDF EAEREYALRI RAQDAGRPPL SNNTGLASIQ VVDINDHIPI FVSTPFQVSV LENAPLGHSV IHIQAVDADH GENARLEYSL TGVAPDTPFV INSATGWVSV SGPLDRESVE HYFFGVEARD HGSPPLSASA SVTVTVLDVN DNRPEFTMKE YHLRLNEDAA VGTSVVSVTA VDRDANSAIS YQITGGNTRN RFAISTQGGV GLVTLALPLD YKQERYFKLV LTASDRALHD HCYVHINITD ANTHRPVFQS AHYSVSVNED RPMGSTIVVI SASDDDVGEN ARITYLLEDN LPQFRIDADS GAITLQAPLD YEDQVTYTLA ITARDNGIPQ KADTTYVEVM VNDVNDNAPQ FVASHYTGLV SEDAPPFTSV LQISATDRDA HANGRVQYTF QNGEDGDGDF TIEPTSGIVR TVRRLDREAV SVYELTAYAV DRGVPPLRTP VSIQVMVQDV NDNAPVFPAE EFEVRVKENS IVGSVVAQIT AVDPDEGPNA HIMYQIVEGN IPELFQMDIF SGELTALIDL DYEARQEYVI VVQATSAPLV SRATVHVRLV DQNDNSPVLN NFQILFNNYV SNRSDTFPSG IIGRIPAYDP DVSDHLFYSF ERGNELQLLV VNQTSGELRL SRKLDNNRPL VASMLVTVTD GLHSVTAQCV LRVVIITEEL LANSLTVRLE NMWQERFLSP LLGRFLEGVA AVLATPAEDV FIFNIQNDTD VGGTVLNVSF SALAPRGAGA GAAGPWFSSE ELQEQLYVRR AALAARSLLD VLPFDDNVCL REPCENYMKC VSVLRFDSSA PFLASASTLF RPIQPIAGLR CRCPPGFTGD FCETELDLCY SNPCRNGGAC ARREGGYTCV	P	Homo sapiens

DTEAGRCV PGVCRNGGTC TDAPNGGFRC QCPAGGAFEG
SSFVMFRG LRQRFHLTLS LSFATVQQSG LLFYNGRLNE
GQVRLTYST GESNTVVSPT VPGGLSDGQW HTVHLRYYNK
PSKDKVAVL SVDDCDVAVA LQFGAEIGNY SCAAAGVQTS
LGGVPNLP ENFPVSHKDF IGCMRDLHID GRRVDMAAFV
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SVTVTRGS GRASHLLLDQ VTVSDGRWHD LRLELQEEPG
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QSERLLTHP KDVDGNDLLS YWPALGECEA APCALQTWGS
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CRAATLGHR AVPAASYGRI YAGGGTGSLS QPASRYSSRE
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DPLLPSRP LDSLSRSSNS REQLDQVPSR HPSREALGPL PQLLRAREDS
LDILSSIL ASFNSSALSS VQSSSTPLGP HTTATPSATA SVLGPSTPRS
EVPRSEG HS
cca gcctcccaac agcagttggc ccctaagtca gaatgggact aacactgagg ccaccccggc A Homo
t cctactatca gcacacctcc cctgtggcgg ccatgttcat tgtggcctat gcgctcatct tcctgctctg sapiens
tgg tctgtttcat cgtgctcaag aaccggcaca tgcatactgt caccaacatg ttcatcctca

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658	193914	Neuropeptide FF 1 Receptor	NP_071429.1	MEGEPSQPPN SSWPLSQNGT NTEATPATNL TFSSYYQHTS PVAAMFIVAY ALIFLLCMVG NTLVCFIVLK NRHMHTVTNM FILNLAVSDL LVGIFCMPTT LVDNLITGWP FDNATCKMSG LVQGMSVSAS VFTLVAIAVE RFRCIVHPFR EKLTLRKALV TIAVIWALAL LIMCPSAVTL TVTREEHHFM VDARNRSYPL YSCWEAWPEK GMRRVYTTVL FSHIYLAPLA LIVVMYARIA RKLCQAPGPA PGGEEAADPR ASRRRARVVH MLVMVALFFT LSWLPLWALL LLIDYGQLSA PQLHLVTVYA FPFAHWLAFF NSSANPIIYG YFNENFRRGF QAAFRARLCP RPSGSHKEAY SERPGGLLHR RVFVVVRPSD SGLPSESGPS SGAPRPGRLP LRNGRVAHHG LPREGPGCSH LPLTIPAWDI	P	Homo sapiens
659	194319	G Protein-Coupled Receptor FLJ22684	NM_025048	agatactgat actttctttc caaacagcat aagaagtgat tgagccacaa gtatactgaa ggaagggctc cctcgagttg tggtgtgaag agataaatca ccagtcacag actatgcacc cgactgctgc tgttcagtcc agggaaaatg aaagttggag tgctgtggct catttctttc ttcaccttca ctgacggcca cggtggcttc ctggggaaaa atgatgacat caaaacaaaa aaagaactca ttgtgaataa gaaaaaacat ctaggcccag tcgaagaata tcagctgctg cttcaggtga cctatagaga ttccaaggag aaaagagatt tgagaaattt tctgaagctc ttgaagcctc cattattatg gtcacatggg ctaattagaa ttatcagagc aaaggctacc acagactgca acagcctgaa tggagtcctg cagtgtacct gtgaagacag ctacacctgg tttcctccct catgccttga tccccagaac tgctaccttc acacggctgg agcactccca agctgtgaat gtcatctcaa caacctcagc cagagtgtca atttctgtga gagaacaaag atttggggca ctttcaaaat taatgaaagg tttacaaatg accttttgaa ttcatcttct gctatatact ccaaatatgc aaatggaatt gaaattcaac ttaaaaaagc atatgaaaga attcaaggtt ttgagtcggt tcaggtcacc caatttcgaa tgtcactctt gtcgcccaag ttggagtgca atggcacaat ctaggctcac tgcaaccctg caacctctgc ctaccgggtt caagagattc ccctgcctca gcctcccaag tagctggaat tacaggcacc tgccaccaca tccagctaac tttttttgta tttttactag agacagggtt tcaccatgtt ggccacactg gtctcaaact cctgacctca ggtgatccgc ctgcctcggc ccccaaagtg ctgggattac aggcatgagc caccacatct ggcctaggac cttaaatatt ggaaagcatc ctcaaaactg tgggtcagtg agtagaacta caaaacaata gcagtagggc agaaacttga aagaaggcag gagatcatgg tgacagtgga tgggaaaaag tgagggttgg ggataagggt tgcgggttgt cgaagggtgg atttctcct tcagcaacta caggagatat gatgcctcat aattcggagc cagaagtggg gctttgggtg agatatcttt gcacagataa catgtataca tcatagttca aaacccagta gtcattgttt acagcaaata aagaaatatt tagtaaatta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa	A	Homo sapiens

660	194319	G Protein-Coupled Receptor FLJ22684	NP_079324.1	MKVGVLWLIS FFTFTDGHGG FLGKNDDIKT KKELIVNKKK HLGPVEEYQL LLQVTYRDSK EKRDLRNFLK LLKPPLLWSH GLIRIIRAKA TTDCNSLNGV LQCTCEDSYT WFPPSCLDPQ NCYLHTAGAL PSCECHLNNL SQSVNFCERT KIWGTFKINE RFTNDLLNSS SAIYSKYANG IEIQLKKAYE RIQGFESVQV TQFRMSLLSP KLECNGTI	P	Homo sapiens
661	194431	Olfactory Receptor, Family 51, Subfamily E, Member 2	NM_030774	atgagttcct gcaacttcac acatgccacc tttgtgctta ttggtatccc aggattagag aaagcccatt tctgggttgg cttcccctc ctttccatgt atgtagtggc aatgtttgga aactgcatcg tggtcttcat cgtaaggacg gaacgcagcc tgcacgctcc gatgtacctc tttctctgca tgcttgcagc cattgacctg gccttatcca catccaccat gcctaagatc cttgcccttt tctggtttga ttcccgagag attagctttg aggcctgtct tacccagatg ttctttattc atgccctctc agccattgaa tccaccatcc tgctggccat ggcctttgac cgttatgtgg ccatctgcca cccactgcgc catgctgcag tgctcaacaa tacagtaaca gcccagattg gcatcgtggc tgtggtccgc ggatccctct ttttttccc actgcctctg ctgatcaagc ggctggcctt ctgccactcc aatgtcctct cgcactccta ttgtgtccac caggatgtaa tgaagttggc ctatgcagac actttgccca atgtggtata tggtcttact gccattctgc tggtcatggg cgtggacgta atgttcatct ccttgtccta ttttctgata atacgaacgg ttctgcaact gccttccaag tcagagcggg ccaaggcctt tggaacctgt gtgtcacaca ttggtgtggt actcgccttc tatgtgccac ttattggcct ctcagttgta caccgctttg gaaacagcct tcatcccatt gtgcgtgttg tcatgggtga catctacctg ctgctgcctc ctgtcatcaa tcccatcatc tatggtgcca aaaccaaaca gatcagaaca cgggtgctgg ctatgttcaa gatcagctgt gacaaggact tgcaggctgt gggaggcaag tga	A	Homo sapiens
662	194431	Olfactory Receptor, Family 51, Subfamily E, Member 2	NP_110401.1	MSSCNFTHAT FVLIGIPGLE KAHFWVGFPL LSMYVVAMFG NCIVVFIVRT ERSLHAPMYL FLCMLAAIDL ALSTSTMPKI LALFWFDSRE ISFEACLTQM FFIHALSAIE STILLAMAFD RYVAICHPLR HAAVLNNTVT AQIGIVAVVR GSLFFFPLPL LIKRLAFCHS NVLSHSYCVH QDVMKLAYAD TLPNVVYGLT AILLVMGVDV MFISLSYFLI IRTVLQLPSK SERAKAFGTC VSHIGVVLAF YVPLIGLSVV HRFGNSLHPI VRVVMGDIYL LLPPVINPII YGAKTKQIRT RVLAMFKISC DKDLQAVGGK	P	Homo sapiens
663	194743	FLJ14454	NM_032787	actttttca tgttctcctt gagtgaagga tgaggaaatt gaaagcagag tatgcacctt ttattaggag attcaaactg catcctactg gattagcctc aaaagtccta aaatacaaag acatccatct gacagatcac tgaggggagg acttgttttt ctgttttaga atagtttccg attaaacttt ttagctcaag aagaaaagaa gctagttatt tctcacccag gagtggattt gtggtttggc ttcaccatgg cttcctgccg tgcctggaac cttagggtgc tggtggctgt cgtgtgtgga ctactgactg gcatcatttt gggactgggc atctggagga ttgtgatcag gatccaaaga ggaaaatcta cttcctcatc aagcacccct acagagttct gcaggaatgg tggaacctgg gaaaatggca gatgtatttg tacagaagag tggaaaggac tgagatgtac aattgctaat ttttgtgaaa atagtaccta tatgggtttt actttgcca gaatcccagt gggcagatat ggaccatcct tgcaaacatg tggcaaggat actccaaatg cggcaatcc aatggcagtc cggttgtgca gtctctctct atatggagag atagaattac aaaaagtgac aataggaaat tgcaatgaaa atctggaaac cctggaaaag caggtagagg atgtcacagc accacttaat aacatttctt ctgaagtcca gattttaaca tctgatgcca ataaattaac tgctgagaac atcactagtg ctacgcgagt ggttggacag atattcaaca cttccagaaa tgcttcacct gaggcaaaga aagttgccat agtaacagtg agtcaactcc tagatgccag tgaagatgct tttcaaagag ttgctgctac tgctaatgat gatgccctta caacgcttat tgagcaaatg gagacttatt ccttgtcttt gggtaatcaa tcagtggtgg aacctaacat agcaatacag tcagcaaatt tctcttcaga aaatgcggtg gggccttcaa atgttcgctt ctctgtgcag aaaggagcta gcagttctct agtttctagt tcaacattta tacatacaaa tgtggatggc cttaacccag atgcacagac tgagcttcag gtcttgctta atatgacgaa aaattacacc aagacatgcg gctttgtagt ttatcaaaat gacaagcttt tccaatcaaa aacttttaca gctaaatcgg attttagtca aaaaattatc tcaagcaaaa ctgatgaaaa tgagcaagat cagagtgctt ctgttgacat ggtctttagt ccaaagtaca accaaaaaga atttcaactc tattcctatg cctgtgtcta ttggaatttg tcagcgaagg actgggacac atatggctgt caaaaagaca agggcactga tggattcctg cgctgccgct gcaaccatac tactaatttt gctgtattaa tgactttcaa aaaggattat caatatccca	A	Homo sapiens

				aatcacttga catattatcc aacgttggat gtgcactgtc tgttactggt ctggctctca cagttatatt tcagattgtc accaggaaag tcagaaaaac ctcagtaacc tgggttttgg tcaatctgtg catatcaatg ttgattttca acctcctctt tgtgtttgga attgaaaact ccaataagaa cttgcagaca agtgatggtg acatcaataa tattgacttt gacaataatg acatacccag gacagacacc attaacatcc cgaatcccat gtgcactgcg attgccgcct tactgcacta ttttctgtta gtgacattta cctggaacgc actcagcgct gcacagctct attaccttct aataaggacc atgaagcctc ttcctcggca tttcattctt ttcatctcat taattggatg gggagtccca gctatagtag tggctataac agtgggagtt atttattctc agaatggaaa taatccacag tgggaattag actaccggca agagaaaatc tgctggctgg caattccaga acccaatggt gttataaaaa gtccgctgtt gtggtcattc atcgtacctg taaccattat cctcatcagc aatgttgtta tgtttattac aatctcgatc aaagtgctgt ggaagaataa ccagaacctg acaagcacaa aaaaagtttc atccatgaag aagattgtta gcacattatc tgttgcagtt gtttttggaa ttacctggat tctagcatac ctgatgctag ttaatgatga tagcatcagg atcgtcttca gctacatatt ctgccttttc aacactacac agggattgca aatttttatc ctgtacactg ttagaacaaa agtcttccag agtgaagctt ccaaagtgtt gatgttgcta tcgtctattg ggagaaggaa gtcattgcct tcagtgacgc ggccgaggct gcgtgtaaag atgtataatt tcctcaggtc attgccaacc ttacatgaac gctttaggct actggaaacc tctccgagta ctgaggaaat cacactctct gaaagtgaca atgcaaagga aagcatctag acagtaaaac ttacctgttg tggtcttttt aatcacctcg tttgagtttt atctgtttct ctcctttatt tcccagtcct ctcagaaagt cttcctcaat gtattttgct caggattaag aattagataa aacctgttgt ttattattat tcggcataat ggacttggta gtttttctat ttttcaatag atttgtactt gaataaggtg aagaatttca cacaacatac aagagtacca ttgttcctta tatcgttaaa tctttgtgac acactttgac aaaaatgtag aacctataac aaattctttt acaagttact ataaaggaca caaagagaaa actttacctt ccagaacaaa atgactcctg atgaacagtg tgtggggatt tgcttgtatg tattaaactt ttgacctctg		
664	194743	FLJ14454	NP_116176.1	MASCRAWNLR VLVAVVCGLL TGIILGLGIW RIVIRIQRGK STSSSSTPTE FCRNGGTWEN GRCICTEEWK GLRCTIANFC ENSTYMGFTF ARIPVGRYGP SLQTCGKDTP NAGNPMAVRL CSLSLYGEIE LQKVTIGNCN ENLETLEKQV EDVTAPLNNI SSEVQILTSD ANKLTAENIT SATRVVGQIF NTSRNASPEA KKVAIVTVSQ LLDASEDAFQ RVAATANDDA LTTLIEQMET YSLSLGNQSV VEPNIAIQSA NFSSENAVGP SNVRFSVQKG ASSSLVSSST FIHTNVDGLN PDAQTELQVL LNMTKNYTKT CGFVVYQNDK LFQSKTFTAK SDFSQKIISS KTDENEQDQS ASVDMVFSPK YNQKEFQLYS YACVYWNLSA KDWDTYGCQK DKGTDGFLRC RCNHTTNFAV LMTFKKDYQY PKSLDILSNV GCALSVTGLA LTVIFQIVTR KVRKTSVTWV LVNLCISMLI FNLLFVFGIE NSNKNLQTSD GDINNIDFDN NDIPRTDTIN IPNPMCTAIA ALLHYFLLVT FTWNALSAAQ LYYLLIRTMK PLPRHFILFI SLIGWGVPAI VVAITVGVIY SQNGNNPQWE LDYRQEKICW LAIPEPNGVI KSPLLWSFIV PVTIILISNV VMFITISIKV LWKNNQNLTS TKKVSSMKKI VSTLSVAVVF GITWILAYLM LVNDDSIRIV FSYIFCLFNT TQGLQIFILY TVRTKVFQSE ASKVLMLLSS IGRRKSLPSV TRPRLRVKMY NFLRSLPTLH ERFRLLETSP STEEITLSES DNAKESI	P	Homo sapiens
665	194745	G Protein-Coupled Receptor SLT/MCH2	NM_032503	cggccgccgg cagggttcgc gaggcaccca cgctcctaaa aagagcacga cgcacccgat gctcggattg gatgaagtgc aaagctttaa tccctggaaa ggccacgaac aatgaatcca tttcatgcat cttgttggaa cacctctgcc gaacttttaa acaaatcctg gaataaagag tttgcttatc aaactgccag tgtggtggat acagtcatcc tcccttccat gattgggatt atctgttcaa cagggctggt tggcaacatc ctcattgtat tcactataat aagatccagg aaaaaaacag tccctgacat ctatatctgc aacctggctg tggctgattt ggtccacata gttggaatgc cttttcttat tcaccaatgg gcccgagggg gagagtgggt gtttgggggg cctctctgca ccatcatcac atccctggat acttgtaacc aatttgcctg tagtgccatc atgactgtaa tgagtgtgga caggtacttt gccctcgtcc	A	Homo sapiens

				aaccatttcg actgacacgt tggagaacaa ggtacaagac catccggatc aatttgggcc tttgggcagc ttcctttatc ctggcattgc ctgtctgggt ctactcgaag gtcatcaaat ttaaagacgg tgttgagagt tgtgcttttg atttgacatc cctgacgat gtactctggt atacacttta tttgacgata acaacttttt ttttccctct acccttgatt ttggtgtgct atattttaat tttatgctat acttgggaga tgtatcaaca gaataaggat gccagatgct gcaatcccag tgtaccaaaa cagaragtga tgaagttgac aaagatggtg ctggtgctgg tggtagtctt tatcctgagt gctgcccctt atcatgtgat acaactggtg aacttacaga tggaacagcc cacactggcc ttctatgtgg gttattacct ctccatctgt ctcagctatg ccagcagcag cattaaccct tttctctaca tcctgctgag tggaaatttc cagaaacgtc tgcctcaaat ccaaagaaga gcgactgaga aggaaatcaa caatatggga aacactctga aatcacactt ttaggaaagt acatggatca ccatgagtct agacatgatt gtctatctta ctggtattat tagaaagggc aggtgtaccg atatgtttat gcccattctt cttgtgtact tgtgactctt agcagcatgg aagagaagtg taaccatgca aatacaatga gcttaatatg ctaactgtaa aaaaaaaaa aaaaaaaaa		
666	194745	G Protein-Coupled Receptor SLT/MCH2	NP_115892.1	MNPFHASCWN TSAELLNKSW NKEFAYQTAS VVDTVILPSM IGIICSTGLV GNILIVFTII RSRKKTVPDI YICNLAVADL VHIVGMPFLI HQWARGGEWV FGGPLCTIIT SLDTCNQFAC SAIMTVMSVD RYFALVQPFR LTRWRTRYKT IRINLGLWAA SFILALPVWV YSKVIKFKDG VESCAFDLTS PDDVLWYTLY LTITTFFFPL PLILVCYILI LCYTWEMYQQ NKDARCCNPS VPKQXVMKLT KMVLVLVVVF ILSAAPYHVI QLVNLQMEQP TLAFYVGYYL SICLSYASSS INPFLYILLS GNFQKRLPQI QRRATEKEIN NMGNTLKSHF	P	Homo sapiens
667	194756	Chemokine Receptor FKSG80/GPR81	NM_032554	ccacacacac aggacccgca tcctgggtga tgaagtcaga cacgcagcag ctgggtgagt gctaacgctc agataagcat ctgtgccatt gtggggactc cctgggctgc tctgcacccg gacacttgct ctgtccccgc catgtacaac gggtcgtgct gccgcatcga gggggacacc atctcccagg tgatgccgcc gctgctcatt gtggcctttg tgctgggcgc actaggcaat ggggtcgccc tgtgtggttt ctgcttccac atgaagacct ggaagcccag cactgtttac cttttcaatt tggccgtggc tgatttcctc cttatgatct gcctgccttt tcggacagac tattacctca gacgtagaca ctgggctttt ggggacattc cctgccgagt ggggctcttc acgttggcca tgaacagggc cgggagcatc gtgttcctta cggtggtggc tgcggacagg tatttcaaag tggtccaccc ccaccacgcg gtgaacacta tctccacccg ggtggcggct ggcatcgtct gcaccctgtg ggccctggtc atcctgggaa cagtgtatct tttgctggag aaccatctct gcgtgcaaga gacggccgtc tcctgtgaga gcttcatcat ggagtcggcc aatggctggc atgacatcat gttccagctg gagttcttta tgcccctcgg catcatctta ttttgctcct tcaagattgt ttggagcctg aggcggaggc agcagctggc cagacaggct cggatgaaga aggcgacccg gttcatcatg gtggtggcaa ttgtgttcat cacatgctac ctgcccagcg tgtctgctag actctatttc ctctggacgg tgccctcgag tgcctgcgat ccctctgtcc atggggccct gcacataacc ctcagcttca cctacatgaa cagcatgctg gatcccctgg tgtattattt ttcaagcccc tcctttccca aattctacaa caagctcaaa atctgcagtc tgaaacccaa gcagccagga cactcaaaaa cacaaaggcc ggaagagatg ccaatttcga acctcggtcg caggagttgc atcagtgtgg caaatagttt ccaaagccag tctgatgggc aatgggatcc ccacattgtt gagtggcact gaacaagcag accaacaaca ctgaggaaga tagagtggtg acttagaatt aactcgtgct aaggggtcgg gggctttgaa aatgccaccc ccctttctta ttgcaagacg gcttctcgca catgaactgc atccttctca ttctgtcgga aatgaaattc acacaactat accttttggg gaggttccag tt	A	Homo sapiens
668	194756	Chemokine Receptor FKSG80/GPR81	NP_115943.1	MYNGSCCRIE GDTISQVMPP LLIVAFVLGA LGNGVALCGF CFHMKTWKPS TVYLFNLAVA DFLLMICLPF RTDYYLRRRH WAFGDIPCRV GLFTLAMNRA GSIVFLTVVA ADRYFKVVHP HHAVNTISTR VAAGIVCTLW ALVILGTVYL LLENHLCVQE TAVSCESFIM ESANGWHDIM FQLEFFMPLG IILFCSFKIV WSLRRRQQLA RQARMKKATR FIMVVAIVFI TCYLPSVSAR LYFLWTVPSS ACDPSVHGAL HITLSFTYMN SMLDPLVYYF SSPSFPKFYN KLKICSLKPK	P	Homo sapiens

				QPGHSKTQRP EEMPISNLGR RSCISVANSF QSQSDGQWDP HIVEWH		
669	194757	G Protein-Coupled Receptor Ls194757	AL162032	gtcatggagt gtctgcacgg gacgtcctgg agagtcggac acgtaagcag cacagtgagg ccaccaacag cagcaaccga gtcttcgtgt actgcgcctt cctggacttc agctccggag aaggggtctg gtcgaaccac ggctgtgcgc tcacgagagg aaacctcacc tactccgtct gccgctgcac tcacctcacc aactttgcca tcctcatgca ggtggtcccg ctggaggtca acattggcat cctcatcgct gtgaccagag tcatctcaca gatcagcgcc gacaactaca agatccatgg agaccccagt gccttcaagt tgacggccaa ggcagtggcc gtgctgctgc ccatcctggg tacctcgtgg gtctttggcg tgcttgctgt caacggttgt gctgtggttt tccagtacat gtttgccacg ctcaactccc tgcagggact gttcatattc ctctttcatt gtctcctgaa ttcagaggtg agagccgcct tcaagcacaa aaccaaggtc tggtcgctca cgagcagctc cgcccgcacc tccaacgcga agcccttcca ctcggacctc atgaatggga cccggccagg catggcctcc accaagctca gcccttggga caagagcagc cactctgccc accgcgtcga cctgtcagcc gtgtgagccg ggaggctgcc aaccaggcca ggctgcgctc agaacacacc cccccaaaca gaatgaaatg ccccaccttt gcccatggac cctctccttg ctgctgtctg gacatgggtg ttgtggcccc gagacagctg tcctcccctg tgactctggc tgtcggagca cactgctcag cccagcagcc tgatgcccag gccagcgtgg gccctcctgc cttgcatcca cccgtggggct gagtgacttc ctcgggggat tcccaggaca cagtggcctg actgtgatgg tgcccttgag cctcccttca tcactcagca tcagacccag cgaggccagg acactcgggg ccggtcccgc agcaccagga ggggatgttc agcctctgtg ccttggtggg gcttggggac tcagggccaa agaggtggtt caggtcccca cgcaccctca gtcaggcgca ggcagctggg ggtgtgtggg gaagagcatg cggagtcccc agtgtctgaa tccactgagt ggtgagttcc ccacagccgg cgctagccgt ggtgtgtgtc tctgtaggtg gtgccggcgt gggccaacct gtgctgtgtc atcagttggg ggcccctgcc caagccgagc tcgagccgtg ggcgggagtc gttgactctc caggtgaggg cgacccctct gccctgtcct tgcgggggtc ccctctgctc acgtgaagag ccgctctggg ccttgaggct gcctgatggt gcctgtgctt gggggagctt ctcggccatc cgctgtgagt tttgcctctt tggaccccaa ttcggcctta agatgccctc ctccctcgtg tgccagcctc cttggttgtt cttgggccac aggagctggc cgtgtccccg cagtgcctgg tgtccaggtg gaaagtggag ggcattttcc agggcactgc tttccccaga ggcttcctca tggctcacag gcactctacg aagtttctaa tgggcagacc acgcggcagg tagcacagtg cgctccgtct ggtcaccatg agaccgacct gcgctgagtc cccactgacc tggagaggga gggctggtga cagccgtgtc ttctgtgttg agggaaattt atggactcag actcagcccc agaggagatg ggataattgt tatggaccca tgtgtgggca tgatcctgtg gaacacaggt ttgggatcat agatgtgaat taagacacca ccgagatacg ggctgtgagg ttcatactgt gctgatagca ctcgtggtgt ctgtgaaatg tgggtaagac attcaaacct ggttttgata ctggaaactc ttcctttaaa actgtgacca tgatttcatt cagcccctcc acacccctat gtctgccttg tttcagagtg agttttctat ggagcctgtg gcccttttgc agcccacctg gtggcttctt aatgtaactc ttcccctggt cgcctggagt ggaccactca tctgcaggcc tctcctgcat ggggagggta ggcagggagc agcatgtctg caggggtgaa cctttgctct tctgtcaggc gaggcccagg ctgcaccagc cacctgccac atggtgacag tgccacgggc cctgcgtatg gcccctgcaa ccgtgctctg gcgggcacac ctggctgctg caggccaagg ccgctgttca gtgaagagtc ccatgtttag tatggactaa agtcccatgt ttagccactg ccccaggctc ccgtgacccc agaaaccagg tcacatggac cacagtgcca gatcctcatc acgccggtga gcacctagaa gtgagaacac tgtattccta caatgtacac ttggatattt ctccttattt agtttctagt gaaacaaatc aagtaaggaa ctatctttag tttagatgga attatttgtt tttaattgtt gccgtattca tctatatagc taatatttca agataagtaa tgaacaaaac ctgtctaaac cttttgtttc caatgaatga aagtcatgca ctttatttat aggctctatg ttttggcttc tgcagtactt ttattatcta tacataattt ggccaaaaat aagaaattgg aaagaatgaa atgtttagtt tatagtagaa gaaagatgat gacactaagt tgtgaaaata tgttgtgatt tttatgaaat aaactcatgt cctgaaaaaa aaaa	A	Homo sapiens
670	194757	G Protein-Coupled Receptor Ls194757	CAB82385.1	HGVSARDVLE SRTRKQHSEA TNSSNRVFVY CAFLDFSSGE GVWSNHGCAL TRGNLTYSVC RCTHLTNFAI LMQVVPLEVN IGILIAVTRV ISQISADNYK IHGDPSAFKL TAKAVAVLLP ILGTSWVFGV LAVNGCAVVF QYMFATLNSL	P	Homo sapiens

				QGLFIFLFHC LLNSEVRAAF KHKTKVWSLT SSSARTSNAK PFHSDLMNGT RPGMASTKLS PWDKSSHSAH RVDLSAV		
671	194858	G Protein-Coupled Receptor LS194858	LG94710	ttagttcaag tccaggtcga cactgctttg gctgcttggg tggtaggcaa tgctggggcc gggactgtcc cgggaggctc ttccccacag cccctgcagg cacctttggg cggctgccct ccaggggggct gtgtagcgct gatcgcccag ccccatggct acgggcactg ccgctgcact ggcacttcct agggagagga gggacaacag tgtcccaggc cccagtggcg ggcgctgctc ataggccagg actgagagga gcagtgtggc cacgtagggc ccccagcaca gcccgaagag cagcatggct ccagcctgtg cccttgcctg cctccaggta agggcccggg ccagggcgga gggctcatcg cggcacactg cccgctccag ccggcagatg tcctgcagct ggcggtgggc agtggccagc acgcggacag agaggaaggc agcagcaccc acggcgggca gcaggagccc atagacttcg aggtacaggt agggggctgg gaagatagcc tgggagctgc agttggcacc aggggtccag tggttccacc ccagagcggg cagactggca aagagcaggg gaccagccca ggtgaggagc agggccagcc gaatgctccc agggggctgg agtggcctca ggactgccat gtagcgctcc ccgtgcacca gcaagaggtt ggcaagcagg gagaggaagg agaagttggg agccaagtag acgaggaggc aggaccagta accccggcga ctctggttcc acagccctgg caatgtgggc aatgccagac ccgtgagcag cccagccagc agtaggctca ggaagaagca gccagcaggt gggctgcgca ggcggcggtc ccaggcgatg cccagggcta ggagcaggtt cgcggtgatg atgaggcttg ccagggccag ggagagcccc aaagcccccct tgggaatggg gctgggcacc tcgccagtgc tgttgggcgt catcttggtc ctggggacag gggagtcctg gagcggcagc cggcatgc	A	Homo sapiens
672	194858	G Protein-Coupled Receptor LS194858	ENSP00000053533	QDTRHGPNRC RAGCSNSLTL RKAQAGQAIP APNSHACRLP LQDSPVPRTK MTPNSTGEVP SPIPKGALGL SLALASLIIT ANLLLALGIA GTAACAATCW LLLPEPTAGW AAHGSGIATL PGLWNQSRRG YWSCLLVYLA PNFSFLSLLA NLLLVHGERY MAVLRPLQPP GSIRLALLLT WAGPLLFASL PALGWNHWTP GANCSSQAIF PAPYLYLEVY GLLLPAVGAA AFLSVRVLAT AHRQLQDICR LERAVCRDEP SALARALTWR QARAQAGAML LFGLCWGPYV ATLLLSVLAY EQRPPLGPGT LLSLLSLGSA SAAAVPVAMG LGDQRYTAPW RQPPKGACRG CGEEPPGTVP APALPTTQAA KAVSTWT	P	Homo sapiens
673	194878	MrgX3 G Protein-Coupled Receptor	AY042215	tcaggcccag gatagagtaa tcatcgggtc cacagcactg gctagatgag tggggggtgtt ttgatcctaa tgttattccc atgttagcac agaacttgtg tggcagtaga gagaggtcag gcttcagagt cagcaagaac tggatttcaa actggatttg aggaccccca cctttgata ggtgacttat tctctgtgag tctctgatct gccctcttta aatgaggaag taaatcccac atggcagggt ggtggggaga atcagagatc atacagctgg tgatcacaac tggtttctgt ttccagggtc accagactgg ggtttctgag catggattca accatcccag tcttgggtac agaactgaca ccaatcaacg gacgtgagga gactccttgc tacaagcaga ccctgagctt cacggggctg acgtgcatcg tttcccttgt cgcgctgaca ggaaacgcgg ttgtgctctg gctcctgggc tgccgcatgc gcaggaacgc tgtctccatc tacatcctca acctggtcgc ggccgacttc ctcttcctta gcggccacat tatatgttcg ccgttacgcc tcatcaatat ccgccatccc atctccaaaa tcctcagtcc tgtgatgacc tttccctact ttataggcct aagcatgctg agcgccatca gcaccgagcg ctgcctgtcc atcctgtggc ccatctggta ccactgccgc cgccccagat acctgtcatc ggtcatgtgt gtcctgctct gggccctgtc cctgctgcgg agtatcctgg agtggatgtt ctgtgacttc ctgtttagtg gtgctgattc tgtttggtgt gaaacgtcag atttcattac aatcgcgtgg ctggtttttt tatgtgtggt tctctgtggg tccagcctgg tcctgctggt caggattctc tgtggatccc ggaagatgcc gctgaccagg ctgtacgtga ccatcctcct cacagtgctg gtcttcctcc tctgtggcct gccctttggc attcagtggg ccctgttttc caggatccac ctggattgga aagtcttatt ttgtcatgtg catctagttt ccatttttcct gtccgctctt aacagcagtg ccaaccccat catttacttc ttcgtgggct cctttaggca gcgtcaaaat aggcagaacc tgaagctggt tctccagagg gctctgcagg acacgcctga ggtggatgaa ggtggagggt ggcttcctca ggaaaccctg gagctgtcgg gaagcagatt ggagcagtga ggaagaacct ctgccctgtc agacaggact ttgagagcaa tgctgccctg ccacccttga caattatatg catttttctt agccttctgc ctcagaaatg	A	Homo sapiens

674	194878	MrgX3 G Protein-Coupled Receptor	AAK91806.1	MDSTIPVLGT ELTPINGREE TPCYKQTLSF TGLTCIVSLV ALTGNAVVLW LLGCRMRRNA VSIYILNLVA ADFLFLSGHI ICSPLRLINI RHPISKILSP VMTFPYFIGL SMLSAISTER CLSILWPIWY HCRRPRYLSS VMCVLLWALS LLRSILEWMF CDFLFSGADS VWCETSDFIT IAWLVFLCVV LCGSSLVLLV RILCGSRKMP LTRLYVTILL TVLVFLLCGL PFGIQWALFS RIHLDWKVLF CHVHLVSIFL SALNSSANPI IYFFVGSFRQ RQNRQNLKLV LQRALQDTPE VDEGGGWLPQ ETLELSGSRL EQ	P	Homo sapiens
675	194903	G Protein-Coupled Receptor GPCRB3	LG100657	tcaggtggag ccgcagcgcc tcgtgtagtc ctgaatggag gcctggaagt gctctgtgct gttgaggtct gggcggcaga ggatcacgta gcacttaggc agaaaatacc caccgaagcc gctgctcagg ctgctcagcc cagccatcat gttggccgca ggcaggtact tgccgtcgta gacgctggcc gtggtgaaga aggcgatcca ggacacgaag ttgaagagca ggctgaaggt gacacatttg gcctcgttgt agttctctgg caagtcctta cccaggtagc tgcaggcaaa ggcactgatg gagaggaggc cattgtagag gaaggccagt atgaagccca gggagttggt ctctgtgcac tcaagcatca ccagatgggg gaagcgctgg tattccctag caggcagtgg ggtccacacc accagccaag ttagacagat aagcagctgg gccgctgagc tgatcatcac aaacaggcca gcaccgtggt tttggaccca ggcgtggtag aatgtaggta ccttggtgga aaacttgaag atgatgatta gttggaatga gcgaactgtc aggcaggaca ggaagatggt gaaaccaagg gcaaagaggg cctggcgtag caagcacgca ggccttgtgg gttccccaaa gaagccatag aggctgccac tacctgctgc cagggagccc agcataagaa agcacaggcg gcccccctgct gacctcacca caggggtgtc taggtgccag gcaaacaggc cagcagtccc aagcagcagc agcagcagca gcgtgttagc tgccagcagc acccaagagg tgtgctcacg caaagccaaa aacaccacag tgcgcgggaa gcaggtctgg cttccctcag gtgcccactc ttctttccca caaggctggc atctgtagag gtctgaaagg gaaggccaag aaggttcctg agagccagat gagcagagta ggaataggaa atagggggcct gcaagatact gggagaattg taccagggca gctagactat actaggcata gtgggatggg ggtagccggg agtggggcct gaggccacgc atttcctcaa aatgcctgtg ttaattacag actctggaga cacacaggtc ggttctgtat ggctcatgat cccatgaggg ttttgcaaac cctagggagg accttaacct ggtagctctg cccacatacc agagaggtta cgatctgatg ggagcagcct gctcccaagg gagggcattg taacccctct ctcttgccag catttccatg aaccactttc ctgagctgct gctctgtggt ttctctgagt cctgaccctc tgaggacaga agggaagtat tcctgtccct acagagatgg tgaaaggaaa gaatgtggcc cctggacacc aactaaggac ctgagtcctt agctacctaa tttgctctct gttcttgacc ttgcatttct ggatggggaa tgctgttttt ttctctgctg cagacacgct agtatctgta ttcaggccaa gctgttcaag gagctagctg tctttggcat gggcaacaga agggacagta ggacaagagg gcacaaaggg aacaatagct atattcattt agagaaagag gttgaattca ggatacgact gcttttgtag gagttgtgat gacagctctc taacagagga cacacctcag tctaaggctt tcagttggct aattctttct ttctttcttt tttttgaga cagagttttt ctcttgtcgc ccaggctgga gtgcaatggt gcaatcttgg ctcactgcaa cctccgcctc ccgggttcaa gcaattctcc tgcctcagcc tcccgagtag ctggaattac aggcacacgc cacaacgccc ggctaacttt ttttgtattt ttagtagaga tggggtttca ccatgttggt caggctggtc tcgaactcct gacctcaggt gatccaccca cctcggcctc ccaaagtgct gggattacag gtgtgagcca ccgcgcccgg cctcctttct tttttgggg ggacgaattc tcgctttgtg gtccaggctg gaatgcatct tggctcactg caacctccgc ctcctgggtt caagtgattc tcctgcctca gcctcccgag tagctgggat tacaggcacg cgccaccaca cccagctaat tttttatatt tttggtagag atggggtttc accatgttgg ccaggctggt ctcgaactcc cgacctcaag tgatccaccc gcctcagcct cccaaagtgc tgggattaca ggcatgagcc accgcaccca gtggctgatt ctcttgatca gaattctgtc tggtagcagg tgtcctccaa cctgaagcta actggcagcc cagtgactgg gccttggttc tggggcaggg cacatggggc ccaagggagg ccctccctcc accgtgcagc ccccgggagt gctgggtagc tcgcctgctc cattgcccac tcaccactct tgttgaggaa ggtcccagcc ccacagggca cacactcaaa gcagcagtga tggaaacccg taaccactcg ctggtgccct tcaagacagt cgctggaaca cacagactta ggcacctgta agaagccaga ggggccacac gtaggggccc aagtcaaagg acagctcaca tgtggaacag aaaacagaat ctctgtgcat ctgccctcag ggctcactcc cagggcaggg cccctggtcg tgtgaacttc cgccccaggg catctgcaca	A	Homo sapiens

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676	194903	G Protein-Coupled Receptor GPCRB3	LR92	RSCSFNEHGY HLFQAMRLGV EEINNSTALL PNITLGYQLY DVCSDSANVY ATLRVLSLPG QHHIELQGDL LHYSPTVLAV IGPDSTNRAA TTAALLSPFL VHISYAASSE TLSVKRQYPS FLRTIPNDKY QVETMVLLLQ KFGWTWISLV GSSDDYGQLG VQALENQALV RGICIAFKDI MPFSAQVGDE RMQCLMRHLA QAGATVVVVF SSRQLARVFF ESVVLTNLTG KVWVASEAWA LSRHITGVPG IQRIGMVLGV AIQKRAVPGL KAFEEAYARA DKEAPRPCHK GSWCSSNQLC RECQAFMAHT MPKLKAFSMS SAYNAYRAVY AVAHGLHQLL GCASELCSRG RVYPWQLLEQ IHKVHFLLHK DTVAFNDNRD PLSSYNIIAW DWNGPKWTFT	P	Homo sapiens

				VLGSSTWSPV QLNINETKIQ WHGKNHQVPK SVCSSDCLEG HQRVVTGFHH CCFECVPCGA GTFLNKSELY RCQPCGTEEW APEGSQTCFP RTVVFLALRE HTSWVLLAAN TLLLLLLLGT AGLFAWHLDT PVVRSAGGRL CFLMLGSLAA GSGSLYGFFG EPTRPACLLR QALFALGFTI FLSCLTVRSF QLIIIFKFST KVPTFYHAWV QNHGAGLFVM ISSAAQLLIC LTWLVVWTPL PAREYQRFPH LVMLECTETN SLGFILAFLY NGLLSISAFA CSYLGKDLPE NYNEAKCVTF SLLFNFVSWI AFFTTASVYD GKYLPAANMM AGLSSLSSGF GGYFPLKCYV ILCRPDLNST EHFQASIQDY TRRCGST		
677	194904	WO0034334-hFB41A	AX147788	gagcaacatg atctttttga agtacttgac ggtgtcgttc ttgacggtca cgaagcacag agtgttgatc atgctgttgc tcatggcgat gcactcgacg atgtagaagg cagtgaggta gtgcttctcc ttcacaaaca cggtggggaa gaagtcgcgc acgatggtga agccgtagaa gggcgcccag catagcacgt aggcggtgag gatgcacatg agcaccagga ccgtcttcct gcggcagcgc agcctcttgc ggatctgctc tgtctggaat ccagggaccg ccttgaacca gagctcccgg gagatcctgg catagcacag ggtcatggtg accacggggc ccacgaattc tatgccaaag ataaagagga agtaggactt gtagtagagc tgctggtcca caggccagat ctggccgcag aagatctttt cctggctctt gacaatgacg aggaccgtct cggtggtgaa gtaggcggaa gggatggcga tcaggatgga caccgtccac accaaggcaa tcaggccagt ggctgtttgg cacttcattc gtggtctcag cggatggaca atagccagat acctagggca agaacacaag tggaggcagc c	A	Homo sapiens
678	194904	WO0034334-hFB41A	LR114	MGFMDDNATN TSTSFLSVLN PHGAHATSFP FNFSYSDYDM PLDEDEDVTN SRTFFAAKIV IGMALVGIML VCGIGNFIFI AALVRYKKLR NLTNLLIANL AISDFLVAIV CCPFEMDYYV VRQLSWEHGH VLCTSVNYLR TVSLYVSTNA LLAIAIDRYL AIVHPLRPRM KCQTATGLIA LVWTVSILIA IPSAYFTTET VLVIVKSQEK IFCGQIWPVD QQLYYKSYFL FIFGIEFVGP VVTMTLCYAR ISRELWFKAV PGFQTEQIRK RLRCRRKTVL VLMCILTAYV LCWAPFYGFT IVRDFFPTVF VKEKHYLTAF YIVECIAMSN SMINTLCFVT VKNDTVKYFK KIMLLHWKAS YNGGKSSADL DLKTIGMPAT EEVDCIRLK	P	Homo sapiens
679	194905	G Protein-Coupled Receptor MGC7035	BC014241	ggcacgaggc gccggccgcc atgtggagct gcagctggtt caacggcaca gggctggtgg aggagctgcc tgcctgccag gacctgcagc tggggctgtc actgttgtcg ctgctgggcc tggtggtggg cgtgccagtg ggcctgtgct acaacgccct gctggtgctg gccaacctac acagcaaggc cagcatgacc atgccggacg tgtactttgt caacatggca gtggcaggcc tggtgctcag cgccctggcc cctgtgcacc tgctcggccc cccgagctcc cggtgggcgc tgtggagtgt gggcggcgaa gtccacgtgg cactgcagat ccccttcaat gtgtcctcac tggtggccat gtactccacc gccctgctga gcctcgacca ctacatcgag cgtgcactgc cgcggaccta catggccagc gtgtacaaca cgcggcacgt gtgcggcttc gtgtggggtg gcgcgctgct gaccagcttc tcctcgctgc tcttctacat ctgcagccat gtgtccaccc gcgcgctaga gtgcgccaag atgcagaacg cagaagctgc cgacgccacg ctggtgttca tcggctacgt ggtgccagca ctggccaccc tctacgcgct ggtgctactc tcccgcgtcc gcagggagga cacgcccctg gaccgggaca cgggccggct ggagccctcg gcacacaggc tgctggtggc caccgtgtgc acgcagtttg ggctctggac gccacactat ctgatcctgc tggggcacac ggtcatcatc tcgcgaggga agcccgtgga cgcacactac ctggggctac tgcactttgt gaaggatttc tccaaactcc tggccttctc cagcagcttt gtgacaccac ttctctaccg ctacatgaac cagagcttcc ccagcaagct ccaacggctg atgaaaaagc tgccctgcgg ggaccggcac tgctccccgg accacatggg ggtgcagcag gtgctggcgt aggcggccca gccctcctgg ggagacgtga ctctggtgga cgcagagcac ttagttaccc tggacgctcc ccacatcctt ccagaaggag acgagctgct ggaagagaag caggaggggt gtttttcttg aagtttcctt tttcccacaa atgccactct tgggccaagg ctgtggtccc cgtggctggc atctggcttg agtctccccg aggcctgtgc gtctcccaaa cacgcagctc aaggtccaca tctgcaaaag	A	Homo sapiens

				cctcctcgcc ttcagcctcc tcagcattca gtttgtcaat gaagtgatga aagcttagag ccagtattta tactttgtgg ttaaaatact tgattccccc ttgtttgttt tacaaaaaca gatgtttcct agaaaaatga caaatagtaa aatgaacaaa accctacgaa agaatggcaa cagccagggt ggccgggccc tgccagtggg cggcgtgtgc tagcaaggcc tgccgggtgt gccgcagtca ccacagggtt ctgagaacat ttcacagaag tgcctgagac gcggagacat ggctggtgtt aaatggagct attcaatagc agtgacgcgc tctcctcagc caccaaatgt ccctgacacc ctccccagcc cccacagata acatcagctg aggttttttt cagtatgaac ctgtcctaaa tcaattcctc aaagtgtgca caaaactaaa gaatataaat aaacaaaaga aaggtgaaaa aaaaaaaaaa aaaaa		
680	194905	G Protein-Coupled Receptor MGC7035	LR112	MWSCSWFNGT XLVEELXACQ DLQLGLSLLS LLGLVVGVPV GLCYNALLVL ANLHSKASMT MPDVYFVNMA VAGLVLSALA PVHLLGPPSS RWALWSVGGE VHVALQIPFN VSSLVAMYST ALLSLDHYIE RALPRTYMAS VYNTRHVCGF VWGGALLTSF SSLLFYICSH VSTRALECAK MQNAEAADAT LVFIGYVVPA LATLYALVLL SRVRREDTPL DRDTGRLEPS AHRLLVATVC TQFGLWTPHY LILLGHTVII SRGKPVDAHY LGLLHFVKDF SKLLAFSSSF VTPLLYRYMN QSFPSKLQRL MKKLPCGDRH CSPDHMGVQQ VLA	P	Homo sapiens
681	194907	G Protein-Coupled Receptor 14273	LD22826	TCCGGACTAG TTCTAGACCG CTGCGGGCCG CCAGGCGCCG GGAATGTCCC CTGAATGCGC GCGGGCAGCG GGCGACGCGC CCTTGCGCAG CCTGGAGCAA GCCAACCGCA CCCGCTTTCC CTTCTTCTCC GACGTCAAGG GCGACCACCG GCTGGTGCTG GCCGCGGTGG AGACAACCGT GCTGGTGCTC ATCTTTGCAG TGTCGCTGCT GGGCAACGTG TGCGCCCTGG TGCTGGTGGC GCGCCGACGA CGCCGCGGCG CGACTGCCTG CCTGGTACTC AACCTCTTCT GCGCGGACCT GCTCTTCATC AGCGCTATCC CTCTGGTGCT GGCCGTGCGC TGGACTGAGG CCTCCCTGCT GGGCCCCGTT GCCTGCCACC TGCTCTTCTA CGTGATGACC CTGAGCGGCA GCGTCACCAT CCTCACGCTG GCCGCGGTCA GCCTGGAGGG CATGGTGRGC ATCGRGCACC TGGAGCGCGG CGTGCGGGGT CCTCCGCGGC GGGCGCGGGC AGTGCTGCTG GCSCTCATCT GGGCCTATTC GGCGGTCGCC GCTCTGCCTC TGTGCGTCTT CTTTCGAGTC GTCCCGCAAC GGCTCCCCGG CGCCGACCAG GAAATTTCGA TTTGCACACT GATTTGGCCC AGCATTCCTC GAGAGATCTC GTGGGATGTC TCTTTTGTTA CTTTGAACTT CTTGGTGCCA GGACTGGTCA TTGTGATCAG TTACTCCAAA ATTTTACAGA TCACAAAGGC ATCAAGGAAG AGGCTCACCG TAAGCCTGGC CTACTCGGAG ACCCACCAGA TCCGCGTGTC CCAGCAGGAC TTCCGGCTCT TCCGCACCCT CTTCCTCCTC ATGGTCTCCT TCTTCATCAT GTGGAGCCCC ATCATCATCA CCATCCTCCT CATCCTGATC CAGAACTTCA AGCAAGACCT GGTCATCTGG CCGTCCCTCT TCTTCTGGGT GGTCCCCTTC ACATTTGCTA ATTCAGCCCT AAACCCCATC CTCTACAACA TGACACTGTG CAGGAATGAG TGGAAGAAAA TTTTTTGCTG CTTCTGGTTC CCAGAAAAGG GAGCCATTTT AACAGACACA TCTGTCAAAA GAAATGACTT GTCGATTATT TCTGGCTAAT TTTCTTTATA GCCGAGTTTC TCACACCTGG CGAGCTGTGG CATGCTTTTA AACAGAGTTC ATTTCCAGTA CCCTCCATCA GTGCACCCTG CTTTAAGAAA ATGAACCTAT GCAAATAGAC ATCCACAGCG TCGGTAAATT AAGGGGTGAT CACCAAGTTT CATAATATTT TCCCTTTATA AAAGGATTTG TTGGCCAGGT GCAGTGGTTC ATGCCTGTAA	A	Homo sapiens

				TCCCAGCAGT TTGGGCTGAG GTGGGTGGAT CACCTGAGGT CAGGAGTTCG AGACCAACCT GACCAACATG GTGAGACCCC CGTCTCTACT AAAAATAAAA AAAAAAATTA GCTGGGAGTG GTGGTGGGCA CCTGTAATCC TAGCTACTTG GGAGGCTCAA CCACGAGAAT CTCTTGAACC TGGGAGGCAG AGGTTGCAGT GAGCCGAGAT CGTGCCATTG CACTCCAACC AGGGCAACAA GAGTGAAACT CCATCTTAAA AAAAAAAAAA AAAGATTTGT TATGGGTTCC TTTTAAATGT GAACTTTTTT AGTGTGTTTG TATATGATCA AATTTAATAA ATATTTATTT ATGACTGTTC AGCAAAAAAA AAAAAAAAAA AGGGCGG		
682	194907	G Protein-Coupled Receptor 14273	LR116	MSPECARAAG DAPLRSLEQA NRTRFPFFSD VKGDHRLVLA AVETTVLVLI FAVSLLGNVC ALVLVARRRR RGATACLVLN LFCADLLFIS AIPLVLAVRW TEAWLLGPVA CHLLFYVMTL SGSVTILTLA AVSLDRMVCI VMLQRGVRCP GRRARAVLLA LIWGYSAVAA LPLCVFFRVV PQRLPGADQE ISICTLIWPT IPGEISWDVS FVTLNFLVPG LVIVISYSKI LQTTKASRKR LTVSLAYSRS HQIRVSQQDF RLFRTLFLLM VSFFIMWSPI IDTILLILIQ NFKQDLVIWP SLPPWVVAPT FANSALNPIL YNMTLCRNEW KKIFCCTWFP EKGAILTDTS VKRNDLSIIS G	P	Homo sapiens
683	194908	G Protein-coupled Receptor Gpcrb4	LR117	ITYSAISDEL RDKVRFPALL RTTPSADHHV EAMVQLMLHF RWNWIIVLVS SDTYGRDNGQ LLGERVARRD ICIAFQETLP TLQPNQNMTS EERQRLVTIV DKLQQSTARV VVVFSPDLTL YHFFNEVLRQ NFTGAVWIAS ESWAIDPVLH NLTELGHLGT FLGITIQSVP IPGFSEFREW GPQAGPPPLS RTSQSYTCNQ ECDNCLNATL SFNTILRLSG ERVVYSVYSA VYAVAHALHS LLGCDKSTCT KRVVYPWQLL EEIWKVNFTL LDHQIFFDPQ GDVALHLEIV QWQWDRSQNP FQSVASYYPL QRQLKNIKTS LHTVNNTIPM SMCSKRCQSG QKKKPVGIHV CCFECIDCLP GTFLNHTECP NNEWSYQSET SCFKRQLVFL EWHEAPTIAV ALLAALGFLS TLAILVIFWR HFQTPIVRSA GGPMCFLMLT LLLVAYMVVP VYVGPPKVST CLCRQALFPL CFTICISCIA VRSFQIVCAF KMASRFPRAY SYWVRYQGPY VSMAFITVLK MVIVVIGMLA RPQSHPRTDP DDPKITIVSC NPNYRNSLLF NTSLDLLLSV VGFSFAYMGK ELPTNYNEAK FITLSMTFYF TSSVSLCTFM SAYSGVLVTI VDLLVTVLNL LAISLGYFGP KCYMILFYPE RNTPAYFNSM IQGYTMRRD	P	Homo sapiens
684	194957	Trace Amine Receptor 4 (TA4)	AF380192	atgagcagca attcatccct gctggtggct gtgcagctgt gctacgcgaa cgtgaatggg tcctgtgtga aaatcccctt ctcgccggga tcccgggtga ttctgtacat agtgtttggc tttggggctg tgctggctgt gtttggaaac ctcctggtga tgatttcaat cctccatttc aagcagctgc actctccgac caattttctc gttgcctctc tggcctgcgc tgatttcttg gtgggtgtga ctgtgatgcc cttcagcatg gtcaggacgg tggagagctg ctggtatttt gggaggagtt tttgtacttt ccacacctgc tgtgatgtgg cattttgtta ctcttctctc tttcacttgt gcttcatctc catcgacagg tacattgcgg ttactgaccc cctggtctat cctaccaagt tcaccgtatc tgtgtcagga atttgcatca gcgtgtcctg gatcctgccc ctcatgtaca gcggtgctgt gttctacaca ggtgtctatg acgatgggct ggaggaatta tctgatgccc taaactgtat aggaggttgt cagaccgttg taaatcaaaa ctgggtgttg acagattttc tatccttctt tatacctacc tttattatga taattctgta tggtaacata tttcttgtgg ctagacgaca ggcgaaaaag atagaaaata ctggtagcaa gacagaatca tcctcagaga gttacaaagc cagagtggcc aggagagaga gaaaagcagc taaaaccctg gggtcacag tggtagcatt tatgatttca tggttaccat atagcattga ttcattaatt gatgccttta tgggctttat aacccctgcc tgtatttatg agatttgctg ttggtgtgct tattataact cagccatgaa tcctttgatt tatgctttat tttacccatg gtttaggaaa gcaataaaag	A	Homo sapiens

				ttattgtaac tggtcaggtt ttaaagaaca gttcagcaac catgaatttg ttttctgaac atatataa		
685	194957	Trace Amine Receptor 4 (TA4)	AAK71243.1	MSSNSSLLVA VQLCYANVNG SCVKIPFSPG SRVILYIVFG FGAVLAVFGN LLVMISILHF KQLHSPTNFL VASLACADFL VGVTVMPFSM VRTVESCWYF GRSFCTFHTC CDVAFCYSSL FHLCFISIDR YIAVTDPLVY PTKFTVSVSG ICISVSWILP LMYSGAVFYT GVYDDGLEEL SDALNCIGGC QTVVNQNWVL TDFLSFFIPT FIMIILYGNI FLVARRQAKK IENTGSKTES SSESYKARVA RRERKAAKTL GVTVVAFMIS WLPYSIDSLI DAFMGFITPA CIYEICCWCA YYNSAMNPLI YALFYPWFRK AIKVIVTGQV LKNSSATMNL FSEHI	P	Homo sapiens
686	194958	Trace Amine Receptor 5 (TA5)	AF380193	atgaccagca atttttccca acctgttgtg cagctttgct atgaggatgt gaatggatct tgtattgaaa ctccctattc tcctgggtcc cgggtaattc tgtacacggc gtttagcttt gggtctttgc tggctgtatt tggaaatctc ttagtaatga cttctgttct tcattttaag cagctgcact ctccaaccaa ttttctcatt gcctctctgg cctgtgctga cttcttggta ggtgtgactg tgatgctttt cagcatggtc aggacggtgg agagctgctg gtattttgga gccaaatttt gtactcttca cagttgctgt gatgtggcat tttgttactc ttctgtcctc cacttgtgct tcatctgcat cgacaggtac attgtggtta ctgatcccct ggtctatgct accaagttca ccgtgtctgt gtcgggaatt tgcatcagcg tgtcctggat tctgcctctc acgtacagcg gtgctgtgtt ctacacaggt gtcaatgatg atgggctgga ggaattagta agtgctctca actgcgtagg tggctgtcaa attattgtaa gtcaaggctg ggtgttgata gattttctgt tattcttcat acctaccctt gttatgataa ttctttacag taagattttt cttatagcta aacaacaagc tataaaaatt gaaactacta gtagcaaagt agaatcatcc tcagagagtt ataaaatcag agtggccaag agagagagga aagcagctaa aaccctgggg gtcacggtac tagcatttgt tatttcatgg ttaccgtata cagttgatat attaattgat gcctttatgg gcttcctgac ccctgcctat atctatgaaa tttgctgttg gagtgcttat tataactcag ccatgaatcc tttgatttat gctctatttt atccttggtt taggaaagcc ataaaactta ttttaagtgg agatgtttta aaggctagtt catcaaccat tagtttattt ttagaataa	A	Homo sapiens
687	194958	Trace Amine Receptor 5 (TA5)	AAK71244.1	MTSNFSQPVV QLCYEDVNGS CIETPYSPGS RVILYTAFSF GSLLAVFGNL LVMTSVLHFK QLHSPTNFLI ASLACADFLV GVTVMLFSMV RTVESCWYFG AKFCTLHSCC DVAFCYSSVL HLCFICIDRY IVVTDPLVYA TKFTVSVSGI CISVSWILPL TYSGAVFYTG VNDDGLEELV SALNCVGGCQ IIVSQGWVLI DFLLFFIPTL VMIILYSKIF LIAKQQAIKI ETTSSKVESS SESYKIRVAK RERKAAKTLG VTVLAFVISW LPYTVDILID AFMGFLTPAY IYEICCWSAY YNSAMNPLIY ALFYPWFRKA IKLILSGDVL KASSSTISLF LE	P	Homo sapiens
688	194989	MrgX4 G Protein-Coupled Receptor	AY042216	tgcatggtct tccttcctgt ccatggatga ccagtcctag tcacgagtgt gtcacaacca cctctttgtg tatctgaatt cctccacctg aaagaaaatt tcagacccag gatagattaa tcatcgggtc caaagccctg gccggatgag tgggggtgtt ttgatcctaa tgttattccc atgtcagcac agaacttgtg tggcagtaga gagatgtcag gcttcagagt caacaagaac tggatttcaa actggatttg aggaccccca cctttggtaa gtgacttatt atctgcgagc ctctgtttct ctcttcttta aatgaggaca gtaaatccca tacggcaggg tggtggggag aatcagagat gatacagctg gtgatcacat ctggtttgtg ttcccagggg caccagacta gagtttctga gcatggatcc aaccgtccca gtcttcggta caaaactgac accaatcaac ggacgtgagg agactccttg ctacaatcag accctgagct tcacggtgct gacgtgcatc atttcccttg tcggactgac aggaaacgcg gtagtgctct ggctcctggg ctaccgcatg cgcaggaacg ctgtctccat ctacatcctc aacctggccg cagcagactt cctcttcctc agcttccaga ttatacgttc gccattacgc ctcatcaata tcagccatct catccgcaaa atcctcgttt ctgtgatgac ctttccctac tttacaggcc tgagtatgct gagcgccatc agcaccgagc gctgcctgtc tgttctgtgg cccatctggt accgctgccg ccgccccaca cacctgtcag cggtcgtgtg tgtcctgctc tggggcctgt ccctgctgtt tagtatgctg gagtggaggt tctgtgactt cctgtttagt ggtgctgatt ctagttggtg tgaaacgtca gatttcatcc cagtcgcgtg gctgattttt ttatgtgtgg ttctctgtgt ttccagcctg gtcctgctgg tcaggatcct ctgtggatcc cggaagatgc cgctgaccag gctgtacgtg accatcctgc	A	Homo sapiens

				tcacagtgct ggtcttcctc ctctgcggcc tgcccttcgg cattctgggg gccctaattt acaggatgca cctgaatttg gaagtcttat attgtcatgt ttatctggtt tgcatgtccc tgtcctctct aaacagtagt gccaaccccca tcatttactt cttcgtgggc tcctttaggc agcgtcaaaa taggcagaac ctgaagctgg ttctccagag ggctctgcag gacaagcctg aggtggataa aggtgaaggg cagcttcctg aggaaagcct ggagctgtcg ggaagcagat tggggccatg agggagagcc tctgccctgt cagtcagacg ggactttgag agcaacactg tcctgccacc cttgacaatt acatgcgttt ttcttagcgt ttcgcctcag aaatgtctca gtggtaactc aaggtcttca aataaatgtt tatctaacct gacagttgca gttttcaccc atggaaagca ttagtctgac agtacaatgt ttgg		
689	194989	MrgX4 G Protein-Coupled Receptor	AAK91807.1	MDPTVPVFGT KLTPINGREE TPCYNQTLSF TVLTCIISLV GLTGNAVVLW LLGYRMRRNA VSIYILNLAA ADFLFLSFQI IRSPLRLINI SHLIRKILVS VMTFPYFTGL SMLSAISTER CLSVLWPIWY RCRRPTHLSA VVCVLLWGLS LLFSMLEWRF CDFLFSGADS SWCETSDFIP VAWLIFLCVV LCVSSLVLLV RILCGSRKMP LTRLYVTILL TVLVFLLCGL PFGILGALIY RMHLNLEVLY CHVYLVCMSL SSLNSSANPI IYFFVGSFRQ RQNRQNLKLV LQRALQDKPE VDKGEGQLPE ESLELSGSRL GP	P	Homo sapiens
690	195015	G Protein-Coupled Receptor GPR82	AF411111	atgaacaaca atacaacatg tattcaacca tctatgatct cttccatggc tttaccaatc atttacatcc tcctttgtat tgttggtgtt tttggaaaca ctctctctca atggatattt ttaacaaaaa taggtaaaaa aacatcaacg cacatctacc tgtcacacct tgtgactgca aacttacttg tgtgcagtgc catgcctttc atgagtatct atttcctgaa aggtttccaa tgggaatatc aatctgctca atgcagagtg gtcaattttc tgggaactct atccatgcat gcaagtatgt ttgtcagtct cttaatttta agttggattg ccataagccg ctatgctacc ttaatgcaaa aggattcctc gcaagagact acttcatgct atgagaaaat attttatggc catttactga aaaaatttcg ccagccccaac tttgctagaa aactatgcat ttacatatgg ggagttgtac tgggcataat cattccagtt accgtatact actcagtcat agaggctaca gaaggagaag agagcctatg ctacaatcgg cagatggaac taggagccat gatctctcag attgcaggtc tcattggaac cacatttatt ggattttcct ttttagtagt actaacatca tactactctt ttgtaagcca tctgagaaaa ataagaacct gtacgtccat tatggagaaa gatttgactt acagttctgt gaaaagacat cttttggtca tccagattct actaatagtt tgcttccttc cttatagtat ttttaaaccc attttttatg ttctacacca aagagataac tgtcagcaat tgaattattt aatagaaaca aaaaacattc tcacctgtct tgcttcggcc agaagtagca cagaccccat tatatttctt ttattagaca aaacattcaa gaagacacta tataatctct ttacaaagtc taattcagca catatgcaat catatggttg a	A	Homo sapiens
691	195015	G Protein-Coupled Receptor GPR82	AAL26482	MNNNTTCIQP SMISSMALPI IYILLCIVGV FGNTLSQWIF LTKIGKKTST HIYLSHLVTA NLLVCSAMPF MSIYFLKGFQ WEYQSAQCRV VNFLGTLSMH ASMFVSLLIL SWIAISRYAT LMQKDSSQET TSCYEKIFYG HLLKKFRQPN FARKLCIYIW GVVLGIIIPV TVYYSVIEAT EGEESLCYNR QMELGAMISQ IAGLIGTTFI GFSFLVVLTS YYSFVSHLRK IRTCTSIMEK DLTYSSVKRH LLVIQILLIV CFLPYSIFKP IFYVLHQRDN CQQLNYLIET KNILTCLASA RSSTDPIIFL LLDKTFKKTL YNLFTKSNSA HMQSYG	P	Homo sapiens

SEQ ID NO:	LSID	Gene	Source ID	Sequence	Code	Species Name
1	127	5-HT1A Receptor	NM_000524	atggatgtgc tcagccctgg tcagggcaac aacaccacat caccaccggc tccctttgag accggcggca acactactgg tatctccgac gtgaccgtca gctaccaagt gatcacctct ctgctgctgg gcacgctcat cttctgcgcg gtgctgggca atgcgtgcgt ggtggctgcc atcgccttgg agcgctccct gcagaacgtg gccaattatc ttattggctc tttggcggtc accgacctca tggtgtcggt gttggtgctg cccatggccg cgctgtatca ggtgctcaac aagtggacac tgggccaggt aacctgcgac ctgttcatcg ccctcgacgt gctgtgctgc acctcatcca tcttgcacct gtgcgccatc gcgctggaca ggtactgggc catcacggac cccatcgact acgtgaacaa gaggacgccc cggccgcgtg cgctcatctc gctcacttgg cttattggct tcctcatctc tatcccgccc atcctgggct ggcgcacccc ggaagaccgc tcggaccccg acgcatgcac cattagcaag gatcatggct acactatcta ttccaccttt ggagctttct acatcccgct gctgctcatg ctggttctct atgggcgcat attccgagct gcgcgcttcc gcatccgcaa gacggtcaaa aaggtggaga agaccggagc ggacacccgc catggagcat ctcccgcccc gcagcccaag aagagtgtga atggagagtc ggggagcagg aactggaggc tgggcgtgga gagcaaggct gggggtgctc tgtgcgccaa tggcgcggtg aggcaaggtg acgatggcgc cgccctggag gtgatcgagg tgcaccgagt gggcaactcc aaagagcact tgcctctgcc cagcgaggct ggtcctaccc cttgtgcccc cgcctctttc gagaggaaaa atgagcgcaa cgccgaggcg aagcgcaaga tggccctggc ccgagagagg aagacagtga agacgctggg catcatcatg ggcaccttca tcctctgctg gctgcccttc ttcatcgtgg ctcttgttct gcccttctgc gagagcagct gccacatgcc caccctgttg ggcgccataa tcaattggct gggctactcc aactctctgc ttaaccccgt catttacgca tacttcaaca aggactttca aaacgcgttt aagaagatca ttaagtgtaa cttctgccgc cagtga	A	Homo sapiens
2	127	5-HT1A Receptor	NP_000515.1	MDVLSPGQGN NTTSPPAPFE TGGNTTGISD VTVSYQVITS LLLGTLIFCA VLGNACVVAA IALERSLQNV ANYLIGSLAV TDLMVSVLVL PMAALYQVLN KWTLGQVTCD LFIALDVLCC TSSILHLCAI ALDRYWAITD PIDYVNKRTP RPRALISLTW LIGFLISIPP ILGWRTPEDR SDPDACTISK DHGYTIYSTF GAFYIPLLLM LVLYGRIFRA ARFRIRKTVK KVEKTGADTR HGASPAPQPK KSVNGESGSR NWRLGVESKA GGALCANGAV RQGDDGAALE VIEVHRVGNS KEHLPLPSEA GPTPCAPASF ERKNERNAEA KRKMALARER KTVKTLGIIM GTFILCWLPF FIVALVLPFC ESSCHMPTLL GAIINWLGYS NSLLNPVIYA YFNKDFQNAF KKIIKCNFCR Q	P	Homo sapiens
3	128	5-HT1B Receptor	NM_000863	atggaggaac cgggtgctca gtgcgctcca ccgccgcccg cgggctccga gacctgggtt cctcaagcca acttatcctc tgctccctcc caaaactgca gcgccaagga ctacatttac caggactcca tctccctacc ctggaaagta ctgctggtta tgctattggc gctcatcacc ttggccacca cgctctccaa tgcctttgtg attgccacag tgtaccggac ccggaaactg cacaccccgg ctaactacct gatcgcctct ctggcggtca ccgacctgct tgtgtccatc ctggtgatgc ccatcagcac catgtacact gtcaccggcc gctggacact gggccaggtg gtctgtgact tctggctgtc gtcggacatc acttgttgca ctgcctccat cctgcacctc tgtgtcatcg ccctggaccg ctactgggcc atcacggacg ccgtggagta ctcagctaaa aggactccca agagggcggc ggtcatgatc gcgctggtgt gggtcttctc catctctatc	A	Homo sapiens

				tcgctgccgc ccttcttctg gcgtcaggct aaggccgaag aggaggtgtc ggaatgcgtg gtgaacaccg accacatcct ctacacggtc tactccacgg tgggtgcttt ctacttcccc accctgctcc tcatcgccct ctatggccgc atctacgtag aagcccgctc ccggattttg aaacagacgc ccaacaggac cggcaagcgc ttgacccgag cccagctgat aaccgactcc cccgggtcca cgtcctcggt cacctctatt aactcgcggg ttcccgacgt gcccagcgaa tccggatctc ctgtgtatgt gaaccaagtc aaagtgcgag tctccgacgc cctgctggaa aagaagaaac tcatggccgc tagggagcgc aaagccacca agaccctagg gatcattttg ggagccttta ttgtgtgttg gctacccttc ttcatcatct ccctagtgat gcctatctgc aaagatgcct gctggttcca cctagccatc tttgacttct tcacatggct gggctatctc aactccctca tcaaccccat aatctatacc atgtccaatg aggactttaa acaagcattc cataaactga tacgttttaa gtgcacaagt tga		
4	128	5-HT1B Receptor	NP_000854.1	MEEPGAQCAP PPPAGSETWV PQANLSSAPS QNCSAKDYIY QDSISLPWKV LLVMLLALIT LATTLSNAFV IATVYRTRKL HTPANYLIAS LAVTDLLVSI LVMPISTMYT VTGRWTLGQV VCDFWLSSDI TCCTASILHL CVIALDRYWA ITDAVEYSAK RTPKRAAVMI ALVWVFSISI SLPPFFWRQA KAEEEVSECV VNTDHILYTV YSTVGAFYFP TLLLIALYGR IYVEARSRIL KQTPNRTGKR LTRAQLITDS PGSTSSVTSI NSRVPDVPSE SGSPVYVNQV KVRVSDALLE KKKLMAARER KATKTLGIIL GAFIVCWLPF FIISLVMPIC KDACWFHLAI FDFFTWLGYL NSLINPIIYT MSNEDFKQAF HKLIRFKCTS	P	Homo sapiens
5	129	5-HT1D Receptor	NM_000864	agccaaatgt gtggaggtct gtgggaagag agagccacct agcatgtccc cactgaacca gtcagcagaa ggccttcccc aggaggcctc caacagatcc ctgaatgcca cagaaacctc agaggcttgg gatcccagga ccctccaggc gctcaagatc tcccttgccg tggtcctttc cgtcatcaca ctggccacag tcctctccaa tgcctttgta ctcaccacca tcttactcac caggaagctc cacacccctg ccaactacct gattggctcc ctggccacca ccgacctctt ggtttccatc ttggtaatgc ccatcagcat cgcctatacc atcacccaca cctggaactt tggccaaatc ttgtgtgaca tctggctgtc ctctgacatc acgtgctgca cagcctccat cctgcatctc tgtgtcattg ctctggacag gtactgggca atcacagatg ccctggaata cagtaaacgc aggacggctg gccacgcggc caccatgatc gccattgtct gggccatctc catctgcatc tccatccccc cgctcttctg gcggcaggcc aaggcccagg aggagatgtc ggactgtctg gtgaacacct ctcagatctc ctacaccatc tactccacct gtggggcctt ctacattccc tcggtgttgc tcatcatcct atatggccgg atctaccggg ctgcccggaa ccgcatcctg aatccaccct cactctatgg gaagcgcttc accacggccc acctcatcac aggctctgcc gggtcctcgc tctgctcgct caactccagc ctccatgagg ggcactcgca ctcggctggc tcccctctct ttttcaacca cgtgaaaatc aagcttgctg acagtgccct ggaacgcaag aggatttctg ctgctcgaga aaggaaagcc actaaaatcc tgggcatcat tctgggggcc tttatcatct gctggctgcc cttcttcgtg gtgtctctgg tcctccccat ctgccgggac tcctgctgga tccacccggc gctctttgac ttcttcacct ggctaggcta tttaaactcc ctcatcaatc caataatcta cactgtgttt aatgaagagt ttcggcaagc ttttcagaaa attgtccctt tccggaaggc ctcctagtct tattcgatga ggtaaagaaa	A	Homo sapiens
6	129	5-HT1D Receptor	NP_000855.1	MSPLNQSAEG LPQEASNRSL NATETSEAWD PRTLQALKIS LAVVLSVITL ATVLSNAFVL TTILLTRKLH TPANYLIGSL ATTDLLVSIL VMPISIAYTI THTWNFGQIL CDIWLSSDIT CCTASILHLC VIALDRYWAI TDALEYSKRR TAGHAATMIA IVWAISICIS IPPLFWRQAK	P	Homo sapiens

				AQEEMSDCLV NTSQISYTIY STCGAFYIPS VLLIILYGRI YRAARNRILN PPSLYGKRFT TAHLITGSAG SSLCSLNSSL HEGHSHSAGS PLFFNHVKIK LADSALERKR ISAARERKAT KILGIILGAF IICWLPFFVV SLVLPICRDS CWIHPALFDF FTWLGYLNSL INPIIYTVFN EEFRQAFQKI VPFRKAS		
7	130	5-HT1E Receptor	NM_000865	atcgaatgtt gagagaagca gtgctctgat ccagctcagg agaaaaagga gcgggttccg agtgagactt ctggagccag ctggacgtgc cggtttgccc agtgcggcgc ggctgcacgc accgtccaca agagtctcag tcgcccaggc tggagtgcag cagcacagtc tcacctcatt gcaacctccg cctcccgggt tcgcgggttc tccgcctcag cttcctagta gctgggattg caggcactca ccaccatgcc cggctaattt tttgaatttt tagtggagac gggatttcac catgttggcc atgctggtct tgaacccccg acctcggatg attcgcccgc ctcggcctcc caaagtgctg gaattacagg cgaaccttca ctcagaagaa atgctgtggc ccttcccttt accaacagaa aatggaacac aagagaccac atagctgaac aaattatagc ctccttacaa gtgagaaacc ttcgaggcta catagttttc agccaaagga aaataaccaa cagcttctcc acagtgtaga ctgaaacaag ggaaacatga acatcacaaa ctgtaccaca gaggccagca tggctataag acccaagacc atcactgaga agatgctcat ttgcatgact ctggtggtca tcaccaccct caccacgttg ctgaacttgg ctgtgatcat ggctattggc accaccaaga agctccacca gcctgccaac tacctaatct gttctctggc cgtgacggac ctcctggtgg cagtgctcgt catgcccctg agcatcatct acattgtcat ggatcgctgg aagcttgggt acttcctctg tgaggtgtgg ctgagtgtgg acatgacctg ctgcacctgc tccatcctcc acctctgtgt cattgccctg gacaggtact gggccatcac caatgctatt gaatacgcca ggaagaggac ggccaagagg gccgcgctga tgatccttac cgtctggacc atctccattt tcatctccat gcccctctg ttctggagaa gccaccgccg cctaagccct ccccctagtc agtgcaccat ccagcacgac catgttatct acaccattta ctccacgctg ggtgcgtttt atatcccctt gactttgata ctgattctct attaccggat ttaccacgcg gccaagagcc tttaccagaa aaggggatca agtcggcact taagcaacag aagcacagat agccagaatt cttttgcaag ttgtaaactt acacagactt tctgtgtgtc tgacttctcc acctcagacc ctaccacaga gtttgaaaag ttccatgcct ccatcaggat cccccccttc gacaatgatc tagatcaccc aggagaacgt cagcagatct ctagcaccag ggaacggaag gcagcacgca tcctggggct gattctgggt gcattcattt tatcctggct gccatttttc atcaaagagt tgattgtggg tctgagcatc tacaccgtgt cctcggaagt ggccgacttt ctgacgtggc tcggttatgt gaattctctg atcaaccctc tgctctatac gagttttaat gaagacttta agctggcttt taaaaagctc attagatgcc gagagcatac ttagactgta aaaagctaaa aggcacgact ttttccagag cctcatgagt ggatgggggt aaggggtgca acttattaat tcttgaacat acttggttca ggagagtttg taagtatgtg tggtcttgtt tccttgtttg tttgtttgtt ttgttctgtt ttgtttgagg attgttattt ggcgtgctgt tttctacctc tggtcttatc tgtgatacat aatttcaaat aaacattatc atacaaaaac aaaaaaaaaa aaaaaaaaaa	A	Homo sapiens
8	130	5-HT1E Receptor	NP_000856.1	MNITNCTTEA SMAIRPKTIT EKMLICMTLV VITTLTTLLN LAVIMAIGTT KKLHQPANYL ICSLAVTDLL VAVLVMPLSI IYIVMDRWKL GYFLCEVWLS VDMTCCTCSI LHLCVIALDR YWAITNAIEY ARKRTAKRAA LMILTVWTIS IFISMPPLFW RSHRRLSPPP SQCTIQHDHV IYTIYSTLGA FYIPLTLILI LYYRIYHAAK SLYQKRGSSR HLSNRSTDSQ NSFASCKLTQ	P	Homo sapiens

				TFCVSDFSTS DPTTEFEKFH ASIRIPPFDN DLDHPGERQQ ISSTRERKAA RILGLILGAF ILSWLPFFIK ELIVGLSIYT VSSEVADFLT WLGYVNSLIN PLLYTSFNED FKLAFKKLIR CREHT		
9	131	5-HT1F Receptor	NM_000866	atggatttct taaattcatc tgatcaaaac ttgacctcag aggaactgtt aaacagaatg ccatccaaaa ttctggtgtc cctcactctg tctgggctgg cactgatgac aacaactatc aactcccttg tgatcgctgc aattattgtg acccggaagc tgcaccatcc agccaattat ttaatttgtt cccttgcagt cacagatttt cttgtggctg tcctggtgat gcccttcagc attgtgtata ttgtgagaga gagctggatt atggggcaag tggtctgtga catttggctg agtgttgaca ttacctgctg cacgtgctcc atcttgcatc tctcagctat agctttggat cggtatcgag caatcacaga tgctgttgag tatgccagga aaaggactcc aaagcatgct ggcattatga ttacaatagt ttggattata tctgttttta tctctatgcc tcctctattc tggaggcacc aaggaactag cagagatgat gaatgcatca tcaagcacga ccacattgtt tccaccattt actcaacatt tggagctttc tacatcccac tggcattgat tttgatcctt tactacaaaa tatatagagc agcaaagaca ttataccaca agagacaagc aagtaggatt gcaaaggagg aggtgaatgg ccaagtcctt ttggagagtg gtgagaaaag cactaaatca gtttccacat cctatgtact agaaaagtct ttatctgacc catcaacaga ctttgataaa attcatagca cagtgagaag tctcaggtct gaattcaagc atgagaaatc ttggagaagg caaaagatct caggtacaag agaacggaaa gcagccacta ccctgggatt aatcttgggt gcatttgtaa tatgttggct tccttttttt gtaaaagaat tagttgttaa tgtctgtgac aaatgtaaaa tttctgaaga aatgtccaat tttttggcat ggcttgggta tctcaattcc cttataaatc cactgattta cacaatcttt aatgaagact tcaagaaagc attccaaaag cttgtgcgat gtcgatgtta g	A	Homo sapiens
10	131	5-HT1F Receptor	NP_000857.1	MDFLNSSDQN LTSEELLNRM PSKILVSLTL SGLALMTTTI NSLVIAAIIV TRKLHHPANY LICSLAVTDF LVAVLVMPFS IVYIVRESWI MGQVVCDIWL SVDITCCTCS ILHLSAIALD RYRAITDAVE YARKRTPKHA GIMITIVWII SVFISMPPLF WRHQGTSRDD ECIIKHDHIV STIYSTFGAF YIPLALILIL YYKIYRAAKT LYHKRQASRI AKEEVNGQVL LESGEKSTKS VSTSYVLEKS LSDPSTDFDK IHSTVRSLRS EFKHEKSWRR QKISGTRERK AATTLGLILG AFVICWLPFF VKELVVNVCD KCKISEEMSN FLAWLGYLNS LINPLIYTIF NEDFKKAFQK LVRCRC	P	Homo sapiens
11	132	5-HT2A Receptor	NM_000621	gaattcgggt gagccagctc cgggagaaca gcatgtacac cagcctcagt gttacagagt gtgggtacat caaggtgaat ggtgagcaga aactataacc tgttagtcct tctacacctc atctgctaca agttctggct tagacatgga tattctttgt gaagaaaata cttctttgag ctcaactacg aactccctaa tgcaattaaa tgatgacacc aggctctaca gtaatgactt taactctgga gaagctaaca cttctgatgc atttaactgg acagtcgact ctgaaaatcg aaccaacctt tcctgtgaag ggtgcctctc accgtcgtgt ctctccttac ttcatctcca ggaaaaaaac tggtctgctt tactgacagc cgtagtgatt attctaacta ttgctggaaa catactcgtc atcatggcag tgtccctaga gaaaaagctg cagaatgcca ccaactattt cctgatgtca cttgccatag ctgatatgct gctgggtttc cttgtcatgc ccgtgtccat gttaaccatc ctgtatgggt accggtggcc tctgccgagc aagctttgtg cagtctggat ttacctggac gtgctcttct ccacggcctc catcatgcac ctctgcgcca tctcgctgga ccgctacgtc gccatccaga atcccatcca ccacagccgc ttcaactcca gaactaaggc	A	Homo sapiens

atttctgaaa atcattgctg tttggaccat atcagtaggt atatccatgc caataccagt
ctttgggcta caggacgatt cgaaggtctt taaggagggg agttgcttac tcgccgatga
taactttgtc ctgatcggct cttttgtgtc atttttcatt cccttaacca tcatggtgat
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tgtggtgatg tggtgccctt tcttcatcac aaacatcatg gccgtcatct gcaaagagtc
ctgcaatgag gatgtcattg ggccctgct caatgtgttt gtttggatcg gttatctctc
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cacaataccg gctttggcct acaagtctag ccaacttcaa atgggacaaa aaaagaattc
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gtatgcctca ttttattctg tcaatgaaaa gcggggttca atgctacaaa atgtgtgctt
ggaaaatgtt ctgacagcat ttcagctgtg agctttctga tacttattta taacattgta
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gattgagttg gttacctatt gccgtaaata aaaatagcta taaatagtga aaattttatt
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tatgtgtgaa gcaaatttct agatatgaga aatataaaaa taattaaaac aaaatccttg
ccttcaaacg aaatggctcg gccaggcacg gaggctcgtg catgtaatcc tagcactttg
ggaggctgag atgggaggat cacttgaggc caagagtttg agaccaacct gggtaacaaa
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actgtggtcc cagctacagg ggaggctgag acgcaaggat cacttgagcc cagaagctca
aggctgcagt gagccaagtt cacaccactg ccatttcctc ctgggcaaca gagtgagacc
ctatcacccc gaattc

12	132	5-HT2A Receptor	NP_000612.1	MDILCEENTS LSSTTNSLMQ LNDDTRLYSN DFNSGEANTS DAFNWTVDSE NRTNLSCEGC LSPSCLSLLH LQEKNWSALL TAVVIILTIA GNILVIMAVS LEKKLQNATN YFLMSLAIAD	P	Homo sapiens

				MLLGFLVMPV SMLTILYGYR WPLPSKLCAV WIYLDVLFST ASIMHLCAIS LDRYVAIQNP IHHSRFNSRT KAFLKIIAVW TISVGISMPI PVFGLQDDSK VFKEGSCLLA DDNFVLIGSF VSFFIPLTIM VITYFLTIKS LQKEATLCVS DLGTRAKLAS FSFLPQSSLS SEKLFQRSIH REPGSYTGRR TMQSISNEQK ACKVLGIVFF LFVVMWCPFF ITNIMAVICK ESCNEDVIGA LLNVFVWIGY LSSAVNPLVY TLFNKTYRSA FSRYIQCQYK ENKKPLQLIL VNTIPALAYK SSQLQMGQKK NSKQDAKTTD NDCSMVALGK QHSEEASKDN SDGVNEKVSC V	
13	133	5-HT2B Receptor	NM_000867	tactaaccat gctgaccact gttcggaacg ggattgaatc acagaaaaac agcaaatggc tctctcttac agagtgtctg aacttcaaag cacaattcct gagcacattt tgcagagcac ctttgttcac gttatctctt ctaactggtc tggattacag acagaatcaa taccagagga aatgaaacag attgttgagg aacagggaaa taaactgcac tgggcagctc ttctgatact catggtgata atacccacaa ttggtggaaa tacccttgtt attctggctg tttcactgga gaagaagctg cagtatgcta ctaattactt tctaatgtcc ttggcggtgg ctgatttgct ggttggattg tttgtgatgc caattgccct cttgacaata atgtttgagg ctatgtggcc cctcccactt gttctatgtc ctgcctggtt atttcttgac gttctctttt caaccgcatc catcatgcat ctctgtgcca tttcagtgga tcgttacata gccatcaaaa agccaatcca ggccaatcaa tataactcac gggctacagc attcatcaag attacagtgg tgtggttaat ttcaataggc attgccattc cagtccctat taaagggata gagactgatg tggacaaccc aaacaatatc acttgtgtgc tgacaaagga acgttttggc gatttcatgc tctttggctc actggctgcc ttcttcacac ctcttgcaat tatgattgtc acctactttc tcactatcca tgctttacag aagaaggctt acttagtcaa aaacaagcca cctcaacgcc taacatggtt gactgtgtct acagttttcc aaagggatga aacaccttgc tcgtcaccgg aaaaggtggc aatgctggat ggttctcgaa aggacaaggc tctgcccaac tcaggtgatg aaacacttat gcgaagaaca tccacaattg ggaaaaagtc agtgcagacc atttccaacg aacagagagc ctcaaaggtc ctagggattg tgtttttcct ctttttgctt atgtggtgtc ccttctttat tacaaatata actttagttt tatgtgattc ctgtaaccaa actactctcc aaatgctcct ggagatattt gtgtggatag gctatgtttc ctcaggagtg aatcctttgg tctacaccct cttcaataag acatttcggg atgcatttgg ccgatatatc acctgcaatt accgggccac aaagtcagta aaaactctca gaaaacgctc cagtaagatc tacttccgga atccaatggc agagaactct aagtttttca agaaacatgg aattcgaaat gggattaacc ctgccatgta ccagagtcca atgaggctcc gaagttcaac cattcagtct tcatcaatca ttctactaga tacgcttctc ctcactgaaa atgaaggtga caaaactgaa gagcaagtta gttatgtata gcagaactgg cagttgtcat caaacataat gatgagtaag atgatgaatg agatgtaaat gtgcccagaa tatattatat aaagaatttt atgtcatata tcaaatcatc tctttaacct aagatgtaag tattaagaat atctaatttt cctaatttgg acaagattat tccatgagga aaataatttt atatagctac aaatgaaaac aatccagcac tctggttaaa ttttaaggta ttcgaatgaa ataaagtcaa atcaataaat ttcaggcttt aaaaaaaaaa	A Homo sapiens
14	133	5-HT2B Receptor	NP_000858.1	MALSYRVSEL QSTIPEHILQ STFVHVISSN WSGLQTESIP EEMKQIVEEQ GNKLHWAALL ILMVIIPTIG GNTLVILAVS LEKKLQYATN YFLMSLAVAD LLVGLFVMPI ALLTIMFEAM WPLPLVLCPA WLFLDVLFST ASIMHLCAIS VDRYIAIKKP IQANQYNSRA TAFIKITVVW LISIGIAIPV PIKGIETDVD NPNNITCVLT KERFGDFMLF GSLAAFFTPL AIMIVTYFLT IHALQKKAYL VKNKPPQRLT WLTVSTVFQR DETPCSSPEK VAMLDGSRKD KALPNSGDET	P Homo sapiens

				LMRRTSTIGK KSVQTISNEQ RASKVLGIVF FLFLLMWCPF FITNITLVLC DSCNQTTLQM		
				LLEIFVWIGY VSSGVNPLVY TLFNKTFRDA FGRYITCNYR ATKSVKTLRK RSSKIYFRNP		
				MAENSKFFKK HGIRNGINPA MYQSPMRLRS STIQSSSIIL LDTLLLTENE GDKTEEQVSY		
				V		
15	134	5-HT2C Receptor	nm_000868	acccgcgcga ggtaggcgct ctggtgcttg cggaggacgc ttccttcctc agatgcaccg	A	Homo sapiens
				atcttcccga tactgccttt ggagcggcta gattgctagc cttggctgct ccattggcct		
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16	134	5-HT2C Receptor	NP_000859.1	MVNLRNAVHS FLVHLIGLLV WQCDISVSPV AAIVTDIFNT SDGGRFKFPD GVQNWPALSI VIIIIMTIGG NILVIMAVSM EKKLHNATNY FLMSLAIADM LVGLLVMPLS LLAILYDYVW PLPRYLCPVW ISLDVLFSTA SIMHLCAISL DRYVAIRNPI EHSRFNSRTK AIMKIAIVWA ISIGVSVPIP VIGLRDEEKV FVNNTTCVLN DPNFVLIGSF VAFFIPLTIM VITYCLTIYV LRRQALMLLH GHTEEPPGLS LDFLKCCKRN TAEEENSANP NQDQNARRRK KKERRPRGTM QAINNERKAS KVLGIVFFVF LIMWCPFFIT NILSVLCEKS CNQKLMEKLL NVFVWIGYVC SGINPLVYTL FNKIYRRAFS NYLRCNYKVE KKPPVRQIPR VAATALSGRE LNVNIYRHTN EPVIEKASDN EPGIEMQVEN LELPVNPSSV VSERISSV	P	Homo sapiens
17	136	5-HT4 Receptor	NM_000870	cggtgcttat ttcctgtaat ggacaaactt gatgctaatg tgagttctga ggagggtttc gggtcagtgg agaaggtggt gctgctcacg tttctctcga cggttatcct gatggccatc ttggggaacc tgctggtgat ggtggctgtg tgctgggaca ggcagctcag gaaaataaaa acaaattatt tcattgtatc tcttgctttt gcggatctgc tggtttcggt gctggtgatg ccctttggtg ccattgagct ggttcaagac atctggattt atggggaggt gttttgtctt gttcggacat ctctggacgt cctgctcaca acggcatcga tttttcacct gtgctgcatt tctctggata ggtattacgc catctgctgc cagcctttgg tctataggaa caagatgacc cctctgcgca tcgcattaat gctgggaggc tgctgggtca tccccacgtt tatttctttt ctccctataa tgcaaggctg gaataacatt ggcataattg atttgataga aaagaggaag ttcaaccaga actctaactc tacgtactgt gtcttcatgg tcaacaagcc ctacgccatc acctgctctg tggtggcctt ctacatccca tttctcctca tggtgctggc ctattaccgc atctatgtca cagctaagga gcatgcccat cagatccaga tgttacaacg ggcaggagcc tcctccgaga gcaggcctca gtcggcagac cagcatagca ctcatcgcat gaggacagag accaaagcag ccaagaccct gtgcatcatc atgggttgct tctgcctctg ctgggcacca ttctttgtca ccaatattgt ggatcctttc atagactaca ctgtccctgg gcaggtgtgg actgctttcc tctggctcgg ctatatcaat tccgggttga accccttttct ctacgccttc ttgaataagt cttttagacg tgccttcctc atcatcctct gctgtgatga tgagcgctac cgaagacctt ccattctggg ccagactgtc ccttgttcaa ccacaaccat taatggatcc acacatgtac taagggatgc agtggagtgt ggtggccagt gggagagtca gtgtcacccg ccagcaactt ctcctttggt ggctgctcag cccagtgaca cttaggcccc tgggacaatg acccagaaga cagccatgcc tccgaaagag ggccaggtcc taagctgctg cttgtgcgcg actgcacccg gcattctctt cacctgaggc tttccgtccg ccagtgcagg aacccggtgc tcgctggg	A	Homo sapiens
18	136	5-HT4 Receptor	NP_000861.1	MDKLDANVSS EEGFGSVEKV VLLTFLSTVI LMAILGNLLV MVAVCWDRQL RKIKTNYFIV SLAFADLLVS VLVMPFGAIE LVQDIWIYGE VFCLVRTSLD VLLTTASIFH LCCISLDRYY AICCQPLVYR NKMTPLRIAL MLGGCWVIPT FISFLPIMQG WNNIGIIDLI EKRKFNQNSN STYCVFMVNK PYAITCSVVA FYIPFLLMVL AYYRIYVTAK EHAHQIQMLQ RAGASSESRP QSADQHSTHR MRTETKAAKT LCIIMGCFCL CWAPFFVTNI VDPFIDYTVP GQVWTAFLWL GYINSGLNPF LYAFLNKSFR RAFLIILCCD DERYRRPSIL GQTVPCSTTT INGSTHVLRD AVECGGQWES QCHPPATSPL VAAQPSDT	P	Homo sapiens
19	138	5-HT6	NM_000871	cccgagagcg cccattcacc cccctcaccc acctccccgc gttcccactt ccccgcactc	A	Homo

		Receptor		tgacccggcc ggacgcccct cccctatctt gccgcccgcc ccctccaggg ggctctgctc ccaccccagg gagcccatcc gacctctgct tgacttcccg ccgcttcctt caggggcctc ggctcatcgg gtgcccctcc ccaaacttcc aacccgtttg ctccaggagt tcctgcccca tccccgaggg cgcccaaata gccacactgt gtcctcctgt agtcgccgcc ccctgaccta gcgcgaccca gcgcccccgc ccatgtcccc ccactcacct cccccggggg gcgtggtgag tcgcggtctg ttctcacgga cggtccccgt ccagcctgcg cttcgccggg gccctcatct gctttcccgc caccctatca ctcccttgcc gtccaccctc ggtcctcatg gtcccagagc cgggcccaac cgccaatagc accccggcct gggggcagg gccgccgtcg gccccggggg gcagcggctg ggtggcggcc gcgctgtgcg tggtcatcgc gctgacggcg gcggccaact cgctgctgat cgcgctcatc tgcactcagc ccgcgctgcg caacacgtcc aacttcttcc tggtgtcgct cttcacgtct gacctgatgg tggggctggt ggtgatgccg ccggccatgc tgaacgcgct gtacgggcgc tgggtgctgg cgcgcggcct ctgcctgctc tggaccgcct tcgacgtgat gtgctgcagc gcctccatcc tcaacctctg cctcatcagc ctggaccgct acctgctcat cctctcgccg ctgcgctaca agctgcgcat gacgcccctg cgtgccctgg ccctagtcct gggcgcctgg agcctcgccg ctctcgcctc cttcctgccc ctgctgctgg gctggcacga gctgggccac gcacggccac ccgtccctgg ccagtgccgc ctgctggcca gcctgccttt tgtccttgtg gcgtcgggcc tcaccttctt cctgccctcg ggtgccatat gcttcaccta ctgcaggatc ctgctagctg cccgcaagca ggccgtgcag gtggcctccc tcaccaccgg catggccagt caggcctcgg agacgctgca ggtgcccagg accccacgcc caggggtgga gtctgctgac agcaggcgtc tagccacgaa gcacagcagg aaggccctga aggccagcct gacgctgggc atcctgctgg gcatgttctt tgtgacctgg ttgcccttct ttgtggccaa catagtccag gccgtgtgcg actgcatctc cccaggcctc ttcgatgtcc tcacatggct gggttactgt aacagcacca tgaaccccat catctaccca ctcttcatgc gggacttcaa gcgggcgctg ggcaggttcc tgccatgtcc acgctgtccc cgggagcgcc aggccagcct ggcctcgcca tcactgcgca cctctcacag cggcccccgg cccggcctta gcctacagca ggtgctgccg ctgcccctgc cgccggactc agattcggac tcagacgcag gctcaggcgg ctcctcgggc ctgcggctca cggcccagct gctgcttcct ggcgaggcca cccaggaccc cccgctgccc accagggccg ctgccgccgt caatttcttc aacatcgacc ccgcggagcc cgagctgcgg ccgcatccac ttggcatccc cacgaactga cccgggcttg gggctggcca atggggagct ggattgagca gaacccagac cctgagtcct tgggccagct cttggctaag accaggaggc tgcaagtctc ctagaagccc tctgagctcc agaggggtgc gcagagctga ccccctgctg ccatctccag gccccttacc tgcagggatc atagctgact caga		sapiens
20	138	5-HT6 Receptor	NP_000862.1	MVPEPGPTAN STPAWGAGPP SAPGGSGWVA AALCVVIALT AAANSLLIAL ICTQPALRNT SNFFLVSLFT SDLMVGLVVM PPAMLNALYG RWVLARGLCL LWTAFDVMCC SASILNLCLI SLDRYLLILS PLRYKLRMTP LRALALVLGA WSLAALASFL PLLLGWHELG HARPPVPGQC RLLASLPFVL VASGLTFFLP SGAICFTYCR ILLAARKQAV QVASLTTGMA SQASETLQVP RTPRPGVESA DSRRLATKHS RKALKASLTL GILLGMFFVT WLPFFVANIV QAVCDCISPG LFDVLTWLGY CNSTMNPIIY PLFMRDFKRA LGRFLPCPRC PRERQASLAS PSLRTSHSGP RPGLSLQQVL PLPLPPDSDS DSDAGSGGSS GLRLTAQLLL PGEATQDPPL PTRAAAAVNF FNIDPAEPEL RPHPLGIPTN	P	Homo sapiens

21	139	5-HT7 Receptor	NM_000872	ccatgggcag cggcacacgg cggcgcgatg atggacgtta acagcagcgg ccgcccggac ctctacgggc acctccgctc tttccttctg ccagaagtgg ggcgcgggct gcccgacttg agccccgacg gtggcgccga cccggtcgcg ggctcctggg cgccgcacct gctgagcgag gtgacagcca gcccggcgcc cacctgggac gcgcccccgg acaatgcctc cggctgtggg gaacagatca actacggcag agtcgagaaa gttgtgatcg gctccatcct gacgctcatc acgctgctga cgatcgcggg caactgcctg gtggtgatct ccgtgtgctt cgtcaagaag ctccgccagc cctccaacta cctgatcgtg tccctggcgc tggccgacct ctcggtggct gtggcggtca tgcccttcgt cagcgtcacc gacctcatcg gggcaagtg gatctttgga cactttttct gtaatgtctt catcgccatg gacgtcatgt gctgcacggc ctcgatcatg accctgtgcg tgatcagcat tgacaggtac cttgggatca caaggcccct cacatacccт gtgaggcaga atgggaaatg catggcgaag atgattctct ccgtctggct tctctccgcc tccatcacct tacctccact ctttggatgg gctcagaatg taaatgatga taaggtgtgc ttgatcagcc aggactttgg ctatacgatt tactctaccg cagtggcatt ttatatcccc atgtccgtca tgcttttcat gtactaccag atttacaagg ctgccaggaa gagtgctgcc aaacacaagt ttcctggctt ccctcgagtg gagccagaca gcgtcatcgc cctgaatggc atagtgaagc tccagaagga ggtggaagag tgtgcaaacc tttcgagact cctcaagcat gaaaggaaaa acatctccat ctttaagcga gaacagaaag cagccaccac cctggggatc atcgtcgggg cctttaccgt gtgctggctg ccattttcc tcctctcgac agccagaccc ttcatctgtg gcacttcctg cagctgcatc ccactgtggg tggagaggac atttctgtgg ctaggctatg caaactctct cattaaccct tttatatatg ccttcttcaa ccgggacctg aggaccacct atcgcagcct gctccagtgc cagtaccgga atatcaaccg gaagctctca gctgcaggca tgcatgaagc cctgaagctt gctgagaggc cagagagacc tgagtttgtg ctacaaaatg ctgactactg tagaaaaaaa ggtcatgatt catgattgaa agcagaacaa tggag	A	Homo sapiens
22	139	5-HT7 Receptor	NP_000863.1	MMDVNSSGRP DLYGHLRSFL LPEVGRGLPD LSPDGGADPV AGSWAPHLLS EVTASPAPTW DAPPDNASGC GEQINYGRVE KVVIGSILTL ITLLTIAGNC LVVISVCFVK KLRQPSNYLI VSLALADLSV AVAVMPFVSV TDLIGGKWIF GHFFCNVFIA MDVMCCTASI MTLCVISIDR YLGITRPLTY PVRQNGKCMA KMILSVWLLS ASITLPPLFG WAQNVNDDKV CLISQDFGYT IYSTAVAFYI PMSVMLFMYY QIYKAARKSA AKHKFPGFPR VEPDSVIALN GIVKLQKEVE ECANLSRLLK HERKNISIFK REQKAATTLG IIVGAFTVCW LPFFLLSTAR PFICGTSCSC IPLWVERTFL WLGYANSLIN PFIYAFFNRD LRTTYRSLLQ CQYRNINRKL SAAGMHEALK LAERPERPEF VLQNADYCRK KGHDS	P	Homo sapiens
23	272	Adenosine A1 Receptor	NM_000674	atgagtgtca gaagtgtgaa gggtgcctgt tctgaatccc agagcctcct ctccctctgt gaggctggca ggtgaggaag ggtttaacct cactggaagg aatccctgga gctagcggct gctgaaggcg tcgaggtgtg gggcacttg gacagaacag tcaggcagcc gggagctctg ccagctttgg tgaccttggg ccgggctggg agcgctgcgg cgggagccgg aggactatga gctgccgcgc gttgtccaga gcccagccca gccctacgcg cgcggcccgg agctctgttc cctggaactt tgggcactgc ctctgggacc cctgccggcc agcaggcagg atggtgcttg cctcgtgccc cttggtgccc gtctgctgat gtgcccagcc tgtgcccgcc atgccgccct ccatctcagc tttccaggcc gcctacatcg gcatcgaggt gctcatcgcc ctggtctctg tgcccgggaa cgtgctggtg atctgggcgg tgaaggtgaa ccaggcgctg cgggatgcca	A	Homo sapiens

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ggatctggga tctggggaag gaccaaccca tgccctgcca agcctggagc ccctgtgttg
gggggcaagg tgggggagcc tggagcccct gtgtgggagg gcgaggcggg ggagcctgga
gcccctgtgt gggagggcga ggcgggggat cctggagccc ctgtgtcggg gggcgaggga
ggggaggtgg ccgtcggttg accttctgaa catgagtgtc aactccagga cttgcttcca
agcccttccc tctgttggaa attgggtgtg ccctggctcc caaggaggc ccatgtgact
aataaaaaac tgtgaaccct

24 272 Adenosine A1 NP_000665.1 MPPSISAFQA AYIGIEVLIA LVSVPGNVLV IWAVKVNQAL RDATFCFIVS LAVADVAVGA P Homo

		Receptor		LVIPLAILIN IGPQTYFHTC LMVACPVLIL TQSSILALLA IAVDRYLRVK IPLRYKMVVT PRRAAVAIAG CWILSFVVGL TPMFGWNNLS AVERAWAANG SMGEPVIKCE FEKVISMEYM VYFNFFVWVL PPLLLMVLIY LEVFYLIRKQ LNKKVSASSG DPQKYYGKEL KIAKSLALIL FLFALSWLPL HILNCITLFC PSCHKPSILT YIAIFLTHGN SAMNPIVYAF RIQKFRVTFL KIWNDHFRCQ PAPPIDEDLP EERPDD	sapiens
25	273	Adenosine A2a Receptor	NM_000675	tttgcaggtg cctcaggaac cctgaagctg ggctgagcca tgatgctgct gccagaaccc A ctgcagaggg cctggtttca ggagactcag agtcctctgt gaaaaagccc ttggagagcg ccccagcagg gctgcacttg gctcctgtga ggaaggggct caggggtctg ggcccctccg cctgggccgg gctgggagcc aggcgggcgg ctgggctgca gcaatggacc gtgagctggc ccagcccgcg tccgtgctga gcctgcctgt cgtctgtggc catgcccatc atgggctcct cggtgtacat cacggtggag ctggccattg ctgtgctggc catcctgggc aatgtgctgg tgtgctgggc cgtgtggctc aacagcaacc tgcagaacgt caccaactac tttgtggtgt cactggcggc ggccgacatc gcagtgggtg tgctcgccat cccctttgcc atcaccatca gcaccgggtt ctgcgctgcc tgccacggct gcctcttcat tgcctgcttc gtcctggtcc tcacgcagag ctccatcttc agtctcctgg ccatcgccat tgaccgctac attgccatcc gcatcccgct ccggtacaat ggcttggtga ccggcacgag ggctaagggc atcattgcca tctgctgggt gctgtcgttt gccatcggcc tgactcccat gctaggttgg aacaactgcg gtcagccaaa ggagggcaag aaccactccc agggctgcgg ggagggccaa gtggcctgtc tctttgagga tgtggtcccc atgaactaca tggtgtactt caacttcttt gcctgtgtgc tggtgcccct gctgctcatg ctgggtgtct atttgcggat cttcctggcg gcgcgacgac agctgaagca gatggagagc cagcctctgc cggggggagcg ggcacggtcc acactgcaga aggaggtcca tgctgccaag tcactggcca tcattgtggg gctctttgcc ctctgctggc tgcccctaca catcatcaac tgcttcactt tcttctgccc cgactgcagc cacgcccctc tctggctcat gtacctggcc atcgtcctct cccacaccaa ttcggttgtg aatcccttca tctacgccta ccgtatccgc gagttccgcc agaccttccg caagatcatt cgcagccacg tcctgaggca gcaagaacct ttcaaggcag ctggcaccag tgcccgggtc ttggcagctc atggcagtga cggagagcag gtcagcctcc gtctcaacgg ccacccgcca ggagtgtggg ccaacggcag tgctccccac cctgagcgga ggcccaatgg ctatgccctg ggctggtga gtggagggag tgcccaagag tcccagggga acacgggcct cccagacgtg gagctcctta gccatgagct caagggagtg tgcccagagc cccctggcct agatgacccc ctggcccagg atggagcagg agtgtcctga tgattcatgg agtttgcccc ttcctaaggg aaggagatct ttatctttct ggttggcttg accagtcacg ttgggagaag agagagagtg ccaggagacc ctgagggcag ccggttccta ctttggactg agagaaggga gccccaggct ggagcagcat gaggcccagc aagaagggct tgggttctga ggaagcagat gtttcatgct gtgaggcctt gcaccaggtg gggggccacag caccagcagc atctttgctg ggcaggccca gccctccact gcagaagcat ctggaagcac caccttgtct ccacagagca gcttgggcac agcagactgg cctggccctg agactgggga gtggctccaa tagcctcctg ccacccacac accactctcc ctagactctc ctagggttca ggagctgctg ggcccagagg tgacatttga ctttttttcca ggaaaaatgt aagtgtgagg aaaccctttt tattttatta cctttcactc tctggctgct gggtctgccg tcggtcctgc tgctaacctg gcaccagagc ctctgcccgg ggagcctcag gcagtcctct cctgctgtca cagctgccat ccacttctca gtcccagggc catctcttgg	Homo sapiens

				agtgacaaag ctgggatcaa ggatagggag ttgtaacaga gcagtgccag agcatgggcc caggtcccag gggagaggtt ggggctggca ggccactggc atgtgctgag tagcgcagag ctacccagtg agaggccttg tctaactgcc tttccttcta aagggaatgt tttttctga gataaaataa aaacgagcca catcgtgttt taagcttgtc caaatgaaaa aaaaaaaaaa aaa		
26	273	Adenosine A2a Receptor	NP_000666.2	MPIMGSSVYI TVELAIAVLA ILGNVLVCWA VWLNSNLQNV TNYFVVSLAA ADIAVGVLAI PFAITISTGF CAACHGCLFI ACFVLVLTQS SIFSLLAIAI DRYIAIRIPL RYNGLVTGTR AKGIIAICWV LSFAIGLTPM LGWNNCGQPK EGKNHSQGCG EGQVACLFED VVPMNYMVYF NFFACVLVPL LLMLGVYLRI FLAARRQLKQ MESQPLPGER ARSTLQKEVH AAKSLAIIVG LFALCWLPLH IINCFTFFCP DCSHAPLWLM YLAIVLSHTN SVVNPFIYAY RIREFRQTFR KIIRSHVLRQ QEPFKAAGTS ARVLAAHGSD GEQVSLRLNG HPPGVWANGS APHPERRPNG YALGLVSGGS AQESQGNTGL PDVELLSHEL KGVCPEPPGL DDPLAQDGAG VS	P	Homo sapiens
27	274	Adenosine A2b Receptor	NM_000676	gggcaatttg ttagttatcc gccgccacca agacgcggca cggcgcctgg accggagggg ccccgcgcgg gcgcgaactt tgggctcggg cgagtgggtg gtgctccgcc cagcccgaga cgggcgggcg cgcgggccaa tgggtgccgc ctcttggccg cgggggcccc cgacccgtgg gtcccggcca ccagcgcccc agccccgagg ctcagaagcg gcaggcggag gcgcggtccg ggcgctatgg ccatgcccgg cgggtctcac gcggctgccc ctcgcccggc gcgccttcgg tagggggcgc ccggggccca gctggcccgg ccatgctgct ggagacacag gacgcgctgt acgtggcgct ggagctggtc atcgccgcgc tttcggtggc gggcaacgtg ctggtgtgcg ccgcggtggg cacggcgaac actctgcaga cgcccaccaa ctacttcctg gtgtccctgg ctgcggccga cgtggccgtg gggctcttcg ccatcccctt tgccatcacc atcagcctgg gcttctgcac tgacttctac ggctgcctct tcctcgcctg cttcgtgctg gtgctcacgc agagctccat cttcagcctt ctggccgtgg cagtcgacag atacctggcc atctgtgtcc cgctcaggta taaaagtttg gtcacgggga cccgagcaag aggggtcatt gctgtcctct gggtccttgc ctttggcatc ggattgactc cattcctggg gtggaacagt aaagacagtg ccaccaacaa ctgcacagaa ccctgggatg gaaccacgaa tgaaagctgc tgccttgtga agtgtctctt tgagaatgtg gtccccatga gctacatggt atatttcaat ttctttgggt gtgttctgcc cccactgctt ataatgctgg tgatctacat taagatcttc ctggtggcct gcaggcagct tcagcgcact gagctgatgg accactcgag gaccaccctc cagcgggaga tccatgcagc caagtcactg gccatgattg tggggatttt tgccctgtgc tggttacctg tgcatgctgt taactgtgtc actctttcc agccagctca gggtaaaaat aagcccaagt gggcaatgaa tatggccatt cttctgtcac atgccaattc agttgtcaat cccattgtct atgcttaccg gaaccgagac ttccgctaca cttttcacaa aattatctcc aggtatcttc tctgccaagc agatgtcaag agtgggaatg gtcaggctgg ggtacagcct gctctcggtg tgggcctatg atctaggctc tcgcctcttc caggagaaga tacaaatcca caagaaacaa agaggacacg gctggttttc attgtgaaag atagctacac ctcacaagga aatggactgc ctctcttgag cacttccctg gagctaccac gtatctagct aatatgtatg tgtcagtagt aggctccaag gattgacaaa tatatttatg atctattcag ctgcttttac tgtgtggatt atgccaacag cttgaatgga ttctaacaga ctcttttgtt tttaaaagtc tgccttgttt atggtggaaa attactgaaa ctatttact gtgaaacagt gtgaactatt ataatgcaaa tactttttaa cttagaggca atggaaaaat aaaagttgac tgtactaaaa atg	A	Homo sapiens

28	274	Adenosine A2b Receptor	NP_000667.1	MLLETQDALY VALELVIAAL SVAGNVLVCA AVGTANTLQT PTNYFLVSLA AADVAVGLFA P IPFAITISLG FCTDFYGCLF LACFVLVLTQ SSIFSLLAVA VDRYLAICVP LRYKSLVTGT RARGVIAVLW VLAFGIGLTP FLGWNSKDSA TNNCTEPWDG TTNESCCLVK CLFENVVPMS YMVYFNFFGC VLPPLLIMLV IYIKIFLVAC RQLQRTELMD HSRTTLQREI HAAKSLAMIV GIFALCWLPV HAVNCVTLFQ PAQGKNKPKW AMNMAILLSH ANSVVNPIVY AYRNRDFRYT FHKIISRYLL CQADVKSGNG QAGVQPALGV GL	Homo sapiens
29	275	Adenosine A3 Receptor	NM_000677	atctttgctg caaaggctgg gtatcggctg tgctcagcaa agcgtcaact cgtgcaagaa A cttagcagga atagttctgg ctaaggttag gaggctgcca ccaaagtctc tttttttgttc ctctgcttct cccgtttgcc tccttatcat gagatctttt tgctaagctg gcagaaagat tgcatagtca gtgcttccag ctctgctccc acctgatcct gcactgtcct ctggtccctg aatgaatgaa ctctgatacc caatcttgtc tcgagccttc tctatgccac tcatggctcc tcttctgctc tttccatctt tttgctgaga gttctgagct ctgtacttcc tcttggccca tctcacttcc tgaaacaccc ctgaagaggg ttgcttatct tgatggaact caaaaagcca aaaagctgca ggcagaggcg ttgaggacat ctgtttgggg aactaagagc agcagcactt tcagattcag tccatataga gctgtcctac agcattctgg aaacttgagg atgtgcggtg cataaagggg ctggaagtga cccacctgtg atgagccctt tctaaggaga agggtttcca agagatcacc ccaccagaaa agggtaggaa tgagcaagtt gggaatttta gactgtcact gcacatggac ctctgggaag acgtctggcg agagctaggc ccactggccc tacagacgga tcttgctggc tcacctgtcc ctgtggaggt tcccctggga aggcaagatg cccaacaaca gcactgctct gtcattggcc aatgttacct acatcaccat ggaaattttc attggactct gcgccatagt gggcaacgtg ctggtcatct gcgtggtcaa gctgaacccc agcctgcaga ccaccacctt ctatttcatt gtctctctag ccctggctga cattgctgtt ggggtgctgg tcatgccttt ggccattgtt gtcagcctgg gcatcacaat ccacttctac agctgccttt ttatgacttg cctactgctt atctttaccc acgcctccat catgtccttg ctggccatcg ctgtggaccg atacttgcgg gtcaagctta ccgtcagata caagagggtc accactcaca gaagaatatg gctggccctg ggcctttgct ggctggtgtc attcctggtg ggattgaccc ccatgtttgg ctggaacatg aaactgacct cagagtacca cagaaatgtc accttccttt catgccaatt tgtttccgtc atgagaatgg actacatggt atacttcagc ttcctcacct ggattttcat ccccctggtt gtcatgtgcg ccatctatct tgacatcttt tacatcattc ggaacaaact cagtctgaac ttatctaact ccaaagagac aggtgcattt tatggacggg agttcaagac ggctaagtcc ttgtttctgg ttcttttctt gtttgctctg tcatggctgc ctttatctat catcaactgc atcatctact ttaatggtga ggtaccacag cttgtgctgt acatgggcat cctgctgtcc catgccaact ccatgatgaa ccctatcgtc tatgcctata aaataaagaa gttcaaggaa acctaccttt tgatcctcaa agcctgtgtg gtctgccatc cctctgattc tttggacaca agcattgaga agaattctga gtagttatcc atcagagatg actctgtctc attgaccttc agattcccca tcaacaaaca cttgagggcc tgtatgcctg ggccaaggga tttttacatc cttgattact tccactgagg tgggagcatc tccagtgctc cccaattata tctcccccac tccactactc tcttcctcca cttcattttt cctttgtcct ttctctctaa ttcagtgttt tggaggcctg acttggggac aacgtattat tgatattatt gtctgttttc cttcttccca atagaagaat aagtcatgga gcctgaaggg tgcctagttg acttactgac aaaaggctct agttgggctg aacatgtgtg tggtggtgac tcatttccat	Homo sapiens

				gccattgtgg aattgagcag agaacctgct ctcggaggat gcctagaaga tgttgggaac agaagaaata aactgagttt aaggggact taaactgctg aattcacctg tggatgtttt tgagtaaata aaagctaata g		
30	275	Adenosine A3 Receptor	NP_000668.1	MPNNSTALSL ANVTYITMEI FIGLCAIVGN VLVICVVKLN PSLQTTTFYF IVSLALADIA VGVLVMPLAI VVSLGITIHF YSCLFMTCLL LIFTHASIMS LLAIAVDRYL RVKLTVRYKR VTTHRRIWLA LGLCWLVSFL VGLTPMFGWN MKLTSEYHRN VTFLSCQFVS VMRMDYMVYF SFLTWIFIPL VVMCAIYLDI FYIIRNKLSL NLSNSKETGA FYGREFKTAK SLFLVLFLFA LSWLPLSIIN CIIYFNGEVP QLVLYMGILL SHANSMMNPI VYAYKIKKFK ETYLLILKAC VVCHPSDSLD TSIEKNSE	P	Homo sapiens
31	309	Melanocortin 2 Receptor (adrenocorticotropic hormone) (MC2R)	NM_000529	atgaagcaca ttatcaactc gtatgaaaac atcaacaaca cagcaagaaa taattccgac tgtcctcgtg tggttttgcc ggaggagata tttttcacaa tttccattgt tggagttttg gagaatctga tcgtcctgct ggctgtgttc aagaataaga atctccaggc acccatgtac tttttcatct gtagcttggc catatctgat atgctgggca gcctatataa gatcttggaa aatatcctga tcatattgag aaacatgggc tatctcaagc cacgtggcag ttttgaaacc acagccgatg acatcatcga ctccctgttt gtcctctccc tgcttggctc catcttcagc ctgtctgtga ttgctgcgga ccgctacatc accatcttcc acgcactgcg gtaccacagc atcgtgacca tgcgccgcac tgtggtggtg cttacggtca tctggacgtt ctgcacgggg actggcatca ccatggtgat cttctcccat catgtgccca cagtgatcac cttcacgtcg ctgttcccgc tgatgctggt cttcatcctg tgcctctatg tgcacatgtt cctgctggct cgatcccaca ccaggaagat ctccaccctc cccagagcca acatgaaagg ggccatcaca ctgaccatcc tgctcggggt cttcatcttc tgctgggccc cctttgtgct tcatgtcctc ttgatgacat tctgcccaag taacccctac tgcgcctgct acatgtctct cttccaggtg aacggcatgt tgatcatgtg caatgccgtc attgacccct tcatatatgc cttccggagc ccagagctca gggacgcatt caaaaagatg atcttctgca gcaggtactg gtag	A	Homo sapiens
32	309	Melanocortin 2 Receptor (adrenocorticotropic hormone) (MC2R)	NP_000520.1	MKHIINSYEN INNTARNNSD CPRVVLPEEI FFTISIVGVL ENLIVLLAVF KNKNLQAPMY FFICSLAISD MLGSLYKILE NILIILRNMG YLKPRGSFET TADDIIDSLF VLSLLGSIFS LSVIAADRYI TIFHALRYHS IVTMRRTVVV LTVIWTFCTG TGITMVIFSH HVPTVITFTS LFPLMLVFIL CLYVHMFLLA RSHTRKISTL PRANMKGAIT LTILLGVFIF CWAPFVLHVL LMTFCPSNPY CACYMSLFQV NGMLIMCNAV IDPFIYAFRS PELRDAFKKM IFCSRYW	P	Homo sapiens
33	376	Alpha 1d-adrenoceptor	nm_000678	tcctgccggc cgctcgttct gtgcccccgg cccggccacc gacggccgcg cgttgagatg actttccgcg atctcctgag cgtcagtttc gagggacccc gcccggacag cagcgcaggg ggctccagcg cgggcggcgg cgggggcagc gcgggcggcg cggccccctc ggagggcccg gcggtgggcg gcgtgccggg gggcgcgggc ggcggcggcg gcgtggtggg cgcaggcagc ggcgaggaca accggagctc cgcgggggag ccggggagcg cgggcgcggg cggcgacgtg aatggcacgg cggccgtcgg gggactggtg gtgagcgcgc agggcgtggg cgtgggcgtc ttcctggcag ccttcatcct tatggccgtg gcaggtaacc tgcttgtcat cctctcagtg gcctgcaacc gccacctgca gaccgtcacc aactatttca tcgtgaacct ggccgtggcc gacctgctgc tgagcgccac cgtactgccc ttctcggcca ccatggaggt tctgggcttc tgggcctttg gccgcgcctt ctgcgacgta tgggccgccg tggacgtgct gtgctgcacg gcctccatcc tcagcctctg caccatctcc gtggaccggt acgtgggcgt gcgccactca	A	Homo sapiens

				ctcaagtacc cagccatcat gaccgagcgc aaggcggccg ccatcctggc cctgctctgg gtcgtagccc tggtggtgtc cgtagggccc ctgctgggct ggaaggagcc cgtgccccct gacgagcgct tctgcggtat caccgaggag gcgggctacg ctgtcttctc ctccgtgtgc tccttctacc tgcccatggc ggtcatcgtg gtcatgtact gccgcgtgta cgtggtcgcg cgcagcacca cgcgcagcct cgaggcaggc gtcaagcgcg agcgaggcaa ggcctccgag gtggtgctgc gcatccactg tcgcggcgcg gccacgggcg ccgacggggc gcacggcatg cgcagcgcca agggccacac cttccgcagc tcgctctccg tgcgcctgct caagttctcc cgtgagaaga aagcggccaa gactctggcc atcgtcgtgg gtgtcttcgt gctctgctgg ttccctttct tctttgtcct gccgctcggc tccttgttcc cgcagctgaa gccatcggag ggcgtcttca aggtcatctt ctggctcggc tacttcaaca gctgcgtgaa cccgctcatc taccccctgtt ccagccgcga gttcaagcgc gccttcctcc gtctcctgcg ctgccagtgc cgtcgtcgcc ggcgccgccg ccctctctgg cgtgtctacg gccaccactg gcgggcctcc accagcggcc tgcgccagga ctgcgccccg agttcgggcg acgcgccccc cggagcgccg ctggccctca ccgcgctccc cgaccccgac cccgaacccc caggcacgcc cgagatgcag gctccggtcg ccagccgtcg aaagccaccc agcgccttcc gcgagtggag gctgctgggg ccgttccgga gacccacgac ccagctgcgc gccaaagtct ccagcctgtc gcacaagatc cgcgccgggg gcgcgcagcg cgcagaggca gcgtgcgccc agcgctcaga ggtggaggct gtgtccctag gcgtcccaca cgaggtggcc gagggcgcca cctgccaggc ctacgaattg gccgactaca gcaacctacg ggagaccgat atttaaggac cccagagcta ggccgcggag tgtgctgggc ttgggggtaa gggggaccag agaggcgggc tggtgttcta agagcccccg tgcaaatcgg agacccggaa actgatcagg gcagctgctc tgtgacatcc ctgaggaact gggcagagct tgaggctgga gcccttgaaa ggtgaaaagt agtggggccc cctgctggac tcaggtgccc agaactcttt tcttagaagg gagaggctgc gggctccgtg gggccttttg ctcccaatcc ctatttgaga aacactgccc catcctccat gccctgaacc ctgagtagac agccccaagc atggccagga aggcctgccc		
34	376	Alpha 1d-adrenoceptor	NP_000669.1	MTFRDLLSVS FEGPRPDSSA GGSSAGGGGG SAGGAAPSEG PAVGGVPGGA GGGGGVVGAG SGEDNRSSAG EPGSAGAGGD VNGTAAVGGL VVSAQGVGVG VFLAAFILMA VAGNLLVILS VACNRHLQTV TNYFIVNLAV ADLLLSATVL PFSATMEVLG FWAFGRAFCD VWAAVDVLCC TASILSLCTI SVDRYVGVRH SLKYPAIMTE RKAAAILALL WVVALVVSVG PLLGWKEPVP PDERFCGITE EAGYAVFSSV CSFYLPMAVI VVMYCRVYVV ARSTTRSLEA GVKRERGKAS EVVLRIHCRG AATGADGAHG MRSAKGHTFR SSLSVRLLKF SREKKAAKTL AIVVGVFVLC WFPFFFVLPL GSLFPQLKPS EGVFKVIFWL GYFNSCVNPL IYPCSSREFK RAFLRLLRCQ CRRRRRRRPL WRVYGHHWRA STSGLRQDCA PSSGDAPPGA PLALTALPDP DPEPPGTPEM QAPVASRRKP PSAFREWRLL GPFRRPTTQL RAKVSSLSHK IRAGGAQRAE AACAQRSEVE AVSLGVPHEV AEGATCQAYE LADYSNLRET DI	P	Homo sapiens
35	377	Alpha 1b-adrenoceptor	NM_000679	aggcaggaga cgtgctgcgg gctgggctgc ccgggggaga tgactcctgc caggagggcg cctctgggaa gaagaccacg ggggaagcaa agtttcaggg cagctgagga gccttcgccg cagcccttcc gagcccaatc atccccccagg ctatggaggg cggactctaa gatgaatccc gacctggaca ccggccacaa cacatcagca cctgcccact ggggagagtt gaaaaatgcc aacttcactg gccccaacca gacctcgagc aactccacac tgccccagct ggacatcacc agggccatct ctgtgggcct ggtgctgggc gccttcatcc tctttgccat cgtgggcaac	A	Homo sapiens

				atcctagtca tcttgtctgt ggcctgcaac cggcacctgc ggacgcccac caactacttc attgtcaacc tggccatggc cgacctgctg ttgagcttca ccgtcctgcc cttctcagcg gccctagagg tgctcggcta ctgggtgctg ggcggatct tctgtgacat ctgggcagcc gtggatgtcc tgtgctgcac agcgtccatt ctgagcctgt gcgccatctc catcgatcgc tacatcgggg tgcgctactc tctgcagtat cccacgctgg tcacccggag gaaggccatc ttggcgctgc tcagtgtctg ggtcttgtcc accgtcatct ccatcgggcc tctccttggg tggaaggagc cggcacccaa cgatgacaag gagtgcgggg tcaccgaaga acccttctat gccctcttct cctctctggg ctccttctac atccctctgg cggtcattct agtcatgtac tgccgtgtct atatagtggc caagagaacc accaagaacc tagaggcagg agtcatgaag gagatgtcca actccaagga gctgaccctg aggatccatt ccaagaactt tcacgaggac acccttagca gtaccaaggc caagggccac aaccccagga gttccatagc tgtcaaactt tttaagttct ccagggaaaa gaaagcagct aagacgttgg gcattgtggt cggtatgttc atcttgtgct ggctaccctt cttcatcgct ctaccgcttg gctccttgtt ctccaccctg aagcccccg acgccgtgtt caaggtggtg ttctggctgg gctacttcaa cagctgcctc aaccccatca tctacccatg ctccagcaag gagttcaagc gcgctttcgt gcgcatcctc gggtgccagt gccgcggccg cggccgccgc cgacgccgcc gccgccgtcg cctgggcggc tgcgcctaca cctaccggcc gtggacgcgc ggcggctcgc tggagcgctc gcagtcgcgc aaggactcgc tggacgacag cggcagctgc ctgagcggca gccagcggac cctgccctcg gcctcgccga gcccgggcta cctgggccgc ggcgcgccac cgccagtcga gctgtgcgcc ttccccgagt ggaaggcgcc cggcgccctc ctgagcctgc ccgcgcctga gcccccggc cgccgcggcc gccacgactc gggcccgctc ttcaccttca agctcctgac cgagcccgag agccccggga ccgacggcgg cgccagcaac ggaggctgcg aggccgcggc cgacgtggcc aacgggcagc cgggcttcaa aagcaacatg cccctggcgc ccgggcagtt ttagggcccc cgtgcgcagc tttctttccc tggggaggaa aacatcgtgg gggga		
36	377	Alpha 1b-adrenoceptor	NP_000670.1	MNPDLDTGHN TSAPAHWGEL KNANFTGPNQ TSSNSTLPQL DITRAISVGL VLGAFILFAI VGNILVILSV ACNRHLRTPT NYFIVNLAMA DLLLSFTVLP FSAALEVLGY WVLGRIFCDI WAAVDVLCCT ASILSLCAIS IDRYIGVRYS LQYPTLVTRR KAILALLSVW VLSTVISIGP LLGWKEPAPN DDKECGVTEE PFYALFSSLG SFYIPLAVIL VMYCRVYIVA KRTTKNLEAG VMKEMSNSKE LTLRIHSKNF HEDTLSSTKA KGHNPRSSIA VKLFKFSREK KAAKTLGIVV GMFILCWLPF FIALPLGSLF STLKPPDAVF KVVFWLGYFN SCLNPIIYPC SSKEFKRAFV RILGCQCRGR GRRRRRRRRR LGGCAYTYRP WTRGGSLERS QSRKDSLDDS GSCLSGSQRT LPSASPSPGY LGRGAPPPVE LCAFPEWKAP GALLSLPAPE PPGRRGRHDS GPLFTFKLLT EPESPGTDGG ASNGGCEAAA DVANGQPGFK SNMPLAPGQF	P	Homo sapiens
37	379	Alpha 1c-adrenoceptor	NM_000680	gaattccgaa tcatgtgcag aatgctgaat cttcccccag ccaggacgaa taagacagcg cggaaaagca gattctcgta attctggaat tgcatgttgc aaggagtctc ctggatcttc gcacccagct tcgggtaggg agggagtccg ggtcccgggc taggccagcc cggcaggtgg agagggtccc cggcagcccc gcgcgcccct ggccatgtct ttaatgccct gccccttcat gtggccttct gagggttccc agggctggcc agggttgttt cccacccgcg cgcgcgctct cacccccagc caaacccacc tggcagggct ccctccagcc gagacctttt gattcccggc tcccgcgctc ccgcctccgc gccagcccgg gaggtggccc tggacagccg gacctcgccc ggccccggct gggaccatgg tgtttctctc gggaaatgct tccgacagct ccaactgcac	A	Homo sapiens

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38	379	Alpha 1c-adrenoceptor	NP_000671.1	MVFLSGNASD SSNCTQPPAP VNISKAILLG VILGGLILFG VLGNILVILS VACHRHLHSV THYYIVNLAV ADLLLTSTVL PFSAIFEVLG YWAFGRVFCN IWAAVDVLCC TASIMGLCII SIDRYIGVSY PLRYPTIVTQ RRGLMALLCV WALSLVISIG PLFGWRQPAP EDETICQINE EPGYVLFSAL GSFYLPLAII LVMYCRVYVV AKRESRGLKS GLKTDKSDSE QVTLRIHRKN APAGGSGMAS AKTKTHFSVR LLKFSREKKA AKTLGIVVGC FVLCWLPFFL VMPIGSFFPD FKPSETVFKI VFWLGYLNSC INPIIYPCSS QEFKKAFQNV LRIQCLRRKQ SSKHALGYTL HPPSQAVEGQ HKDMVRIPVG SRETFYRISK TDGVCEWKFF SSMPRGSARI TVSKDQSSCT TARVRSKSFL EVCCCVGPST PSLDKNHQVP TIKVHTISLS ENGEEV	P	Homo sapiens
39	387	Alpha 2a-adrenoceptor	NM_000681	gcgctcggcg cccaccaggc ggacgcccag gagaacccct gcctccgtcg cggctcctgg agagctgatc gttcacctgc cccggcccgc ctgaggacgg gggtgccttc atgcggcccc	A	Homo sapiens

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40	387	Alpha 2a-adrenoceptor	AAA51664.1	MGSLQPDAGN ASWNGTEAPG GGARATPYSL QVTLTLVCLA GLLMLLTVFG NVLVIIAVFT SRALKAPQNL FLVSLASADI LVATLVIPFS LANEVMGYWY FGKTWCEIYL ALDVLFCTSS IVHLCAISLD RYWSITQAIE YNLKRTPRRI KAIIITCWVI SAVISFPPLI SIEKKGGGGG PQPAEPRCEI NDQKWYVISS CIGSFFAPCL IMILVYVRIY QIAKRRTRVP PSRRGPDAVA APPGGTERRP NGLGPERSAG PGGAEAEPLP TQLNGAPGEP APAGPRDTDA LDLEESSSSD HAERPPGPRR PERGPRGKGK ARASQVKPGD SLRGAGRGRR GSGRRLQGRG RSASGLPRRR AGAGGQNLEK RFTFVLAVVI GVFVVCWFPF FFTYTLTAVG CSVPRTLFKF FFWFGYCNSS LNPVIYTIFN HDFRRAFKKI LCRGDRKRIV	P	Homo sapiens
41	388	Alpha 2b-adrenoceptor	NM_000682	atggaccacc aggaccccta ctccgtgcag gccacagcgg ccatagcggc ggccatcacc ttcctcattc tctttaccat cttcggcaac gctctggtca tcctggctgt gttgaccagc cgctcgctgc gcgcccctca gaacctgttc ctggtgtcgc tggccgccgc cgacatcctg gtggccacgc tcatcatccc tttctcgctg gccaacgagc tgctgggcta ctggtacttc cggcgcacgt ggtgcgaggt gtacctggcg ctcgacgtgc tcttctgcac ctcgtccatc gtgcacctgt gcgccatcag cctggaccgc tactgggccg tgagccgcgc gctggagtac aactccaagc gcaccccgcg ccgcatcaag tgcatcatcc tcactgtgtg gctcatcgcc gccgtcatct cgctgccgcc cctcatctac aagggcgacc agggccccca gccgcgcggg cgcccccagt gcaagctcaa ccaggaggcc tggtacatcc tggcctccag catcggatct ttctttgctc cttgcctcat catgatcctt gtctacctgc gcatctacct gatcgccaaa cgcagcaacc gcagaggtcc cagggccaag gggggcctg ggcagggtga gtccaagcag ccccgacccg accatggtgg ggctttggcc tcagccaaac tgccagccct ggcctctgtg gcttctgcca gagaggtcaa cggacactcg aagtccactg ggagaagga ggagggggag acccctgaag atactgggac ccgggccttg ccacccagtt gggctgccct tcccaactca ggccagggcc agaaggaggg tgtttgtggg gcatctccag aggatgaagc tgaagaggag	A	Homo sapiens

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42 388 Alpha 2b- NP_000673.1 MDHQDPYSVQ ATAAIAAAIT FLILFTIFGN ALVILAVLTS RSLRAPQNLF LVSLAAADIL P Homo

		adrenoceptor		VATLIIPFSL ANELLGYWYF RRTWCEVYLA LDVLFCTSSI VHLCAISLDR YWAVSRALEY NSKRTPRRIK CIILTVWLIA AVISLPPLIY KGDQGPQPRG RPQCKLNQEA WYILASSIGS FFAPCLIMIL VYLRIYLIAK RSNRRGPRAK GGPGQGESKQ PRPDHGGALA SAKLPALASV ASAREVNGHS KSTGEKEEGE TPEDTGTRAL PPSWAALPNS GQGQKEGVCG ASPEDEAEEE EEEEEEEEEC EPQAVPVSPA SACSPPLQQP QGSRVLATLR GQVLLGRGVG AIGGQWWRRR AHVTREKRFT FVLAVVIGVF VLCWFPFFFS YSLGAICPKH CKVPHGLFQF FFWIGYCNSS LNPVIYTIFN QDFRRAFRRI LCRPWTQTAW		sapiens
43	389	Alpha 2c- adrenoceptor	NM_000683	ctgcaggcgg ccctggaggg ggcgccctcg ccgagcgcgc gccccgcgcc gccgccccgg actcctcccc ggcgccgcgc gggcaggttc gaccaggcgg ccgcgggctc cggttcccgg ccagctcccc agggcccgcg gcgccccgcc ccgcgcgccc gccccgctgc gctaactcga cccaagttgg aagccgatcg caggcggccg cactcgcgcc cagcgagggc ggcggcggcg gcggcggcgc agctccggcg agcgaggcgg cggccgcacg gcaagcgtgg accgcggggg gcgcccgcgc cgggagcagc cggaggactc gcggcggcgc cggcgccccg cccgggaaag taaagttgga gacggaggga gcgcgcgggg cgggcccgga ggagcggcgg ccggcgcccc ggcgcgcgca gccctagccg ccggatggga ggcggacggc ccgggccgcc gccgccttgt cgcctgcgcc ccggctgggc tccgggaccg cggggccgct acggcaccgc cgctcggccc gcgtcgcgtg ggctcgccgc cggggcgctc ccgtgagccg ggccgaggcg gggcgcgcga ggaccccggg acctgccccc ctcccccgc agccgcgtcg ccgctcgctc cgggcgcctc ctgctctgca cttacacgct cggcagctgc ggggagcccg gcagccacgc tctccggcgc gccgcccgcg gagccaccac ggccgagggc cggctgctgg gcgccgcggt ccccggcggg cgcgcccgag cagcaggcgg cgatgcgggc gccgaccccg gctgggggc gcccgagctg ccgcggctgc gccccggctc caggaggggc ggcgtagccc gcgggaggac catggcgtcc ccggcgctgg cggcggcgct ggcggtggcg gcagcggcgg gccccaatgc gagcggcgcg ggcgagaggg gcagcggcgg ggttgccaat gcctcggggg cttcctgggg gccgccgcgc ggccagtact cggcgggcgc ggtggcaggg ctggctgccg tggtgggctt cctcatcgtc ttcaccgtgg tgggcaacgt gctggtggtg atcgccgtgc tgaccagccg ggcgctgcgc gcgccacaga acctcttcct ggtgtcgctg gcctcggccg acatcctggt ggccacgctg gtcatgccct tctcgttggc caacgagctc atggcctact ggtacttcgg gcaggtgtgg tgcggcgtgt acctggcgct cgatgtgctg ttttgcacct cgtcgatcgt gcatctgtgt gccatcagcc tggaccgcta ctggtcggtg acgcaggccg tcgagtacaa cctgaagcgc acaccacgcc gcgtcaaggc caccatcgtc gccgtgtggc tcatctcggc cgtcatctcc ttcccgccgc tggtctcgct ctaccgccag cccgacggcg ccgcctaccc gcagtgcggc ctcaacgacg agacctggta catcctgtcc tcctgcatcg gctccttctt cgcgccctgc ctcatcatgg gcctggtcta cgcgcgcatc taccgagtgg ccaagcgtcg cacgcgcacg ctcagcgaga agcgcgcccc cgtgggcccc gacggtgcgt ccccgactac cgaaaacggg ctgggcgcgg cggcaggcga ggcgagaacg ggcactgcgc gcccccgccc gccgacgtgg agccggacga gagcagcgca gcggccgaga ggcggcgcgc cggggccgtt gcggcggggc gggcggcggc gagcggcgc ggagggggc gcgggcggtg cggacgggca gggggcgggg ccgggggcgg ctcagtcggg ggcgctgacc gcctccaggt ccccgggcc cggtggccgc ctctcgcgcg ccagctcgcg ctccgtcgag ttcttcctgt cgcgccggcg ccgggcgcgc agcagcgtgt gccgccgcaa ggtggcccag gcgcgcgaga agcgcttcac ctttgtgctg	A	Homo sapiens

				gctgtggtca tgggcgtgtt cgtgctctgc tggttcccct tcttcttcat ctacagcctg tacggcatct gccgcgaggc ctgccaggtg cccggcccgc tcttcaagtt cttcttctgg atcggctact gcaacagctc gctcaacccg gtcatctaca cggtcttcaa ccaggatttc cggccatcct tcaagcacat cctcttccga cggaggagaa ggggcttcag gcagtgactc gcacccgtct gggaatcctg gacagctccg cgctcggggc tgggcagaag ggcggcccg gacgcggggg agctttccca gagacccggg gagctttccc agagacccgg ggatggattg gcctccaggg cgcaggggag ggtgcggcag ggcaggagct tggcagagag atagccgggc tccagggagt ggggaggaga gagggggaga ccccttgcc ttcccccctc agcaaggggc tgcttctggg gctccctgcc tggatccagc tctgggagcc ctgccgaggt gtggctgtga ggtcagggtt ttagagagca gtggcagagg tagccccccta aatgggcaag caaggagccc cccaaagaca ctaccactcc ccatccccgt ctgaccaagg gctgacttct ccaggaccta gtcgggggt ggctgccagg gggcaaggag aaagcaccga caatctttga ttactgaaag tatttaaatg tttgccaaaa acaacagcca aaacaaccaa actattttct aaataaacct ttgtaa		
44	389	Alpha 2c-adrenoceptor	NP_000674.1	MASPALAAAL AVAAAAGPNA SGAGERGSGG VANASGASWG PPRGQYSAGA VAGLAAVVGF LIVFTVVGNV LVVIAVLTSR ALRAPQNLFL VSLASADILV ATLVMPFSLA NELMAYWYFG QVWCGVYLAL DVLFCTSSIV HLCAISLDRY WSVTQAVEYN LKRTPRRVKA TIVAVWLISA VISFPPLVSL YRQPDGAAYP QCGLNDETWY ILSSCIGSFF APCLIMGLVY ARIYRVAKRR TRTLSEKRAP VGPDGASPTT ENGLGAAAGE ARTGTARPRP PTWSRTRAAQ RPRGGAPGPL RRGGRRRAGA EGGAGGADGQ GAGPGAAQSG ALTASRSPGP GGRLSRASSR SVEFFLSRRR RARSSVCRRK VAQAREKRFT FVLAVVMGVF VLCWFPFFFI YSLYGICREA CQVPGPLFKF FFWIGYCNSS LNPVIYTVFN QDFRPSFKHI LFRRRRRGFR Q	P	Homo sapiens
45	599	Bradykinin B1 Receptor	NM_000710	ctgtgcatgg catcatcctg gccccctcta gagctccaat cctccaacca gagccagctc ttccctcaaa atgctacggc ctgtgacaat gctccagaag cctgggacct gctgcacaga gtgctgccga catttatcat ctccatctgt ttcttcggcc tcctagggaa cctttttgtc ctgttggtct tcctcctgcc ccggcggcaa ctgaacgtgg cagaaatcta cctggccaac ctggcagcct ctgatctggt gtttgtcttg ggcttgccct tctgggcaga gaatatctgg aaccagttta actggccttt cggagccctc ctctgccgtg tcatcaacgg ggtcatcaag gccaatttgt tcatcagcat cttcctggtg gtggccatca gccaggaccg ctaccgcgtg ctggtgcacc ctatggccag cggaaggcag cagcggcgga ggcaggcccg ggtcacctgc gtgctcatct gggttgtggg gggcctcttg agcatcccca cattcctgct gcgatccatc caagccgtcc cagatctgaa catcaccgcc tgcatcctgc tcctccccca tgaggcctgg cactttgcaa ggattgtgga gttaaatatt ctgggtttcc tcctaccact ggctgcgatc gtcttcttca actaccacat cctggcctcc ctgcgaacgc gggaggaggt cagcaggaca agagtgcggg ggccgaagga tagcaagacc acagcgctga tcctcacgct cgtggttgcc ttcctggtct gctgggcccc ttaccacttc tttgccttcc tggaattctt attccaggtg caagcagtcc gaggctgctt ttgggaggac ttcattgacc tgggcctgca attggccaac ttctttgcct tcactaacag ctccctgaat ccagtaattt atgtctttgt gggccggctc ttcaggacca aggtctggga actttataaa caatgcaccc ctaaaagtct tgctccaata tcttcatccc ataggaaaga aatcttccaa cttttctggc ggaattaaaa cagcattgaa cc	A	Homo sapiens

46	599	Bradykinin B1 Receptor	NP_000701.1	MASSWPPLEL QSSNQSQLFP QNATACDNAP EAWDLLHRVL PTFIISICFF GLLGNLFVLL VFLLPRRQLN VAEIYLANLA ASDLVFVLGL PFWAENIWNQ FNWPFGALLC RVINGVIKAN LFISIFLVVA ISQDRYRVLV HPMASGRQQR RRQARVTCVL IWVVGGLLSI PTFLLRSIQA VPDLNITACI LLLPHEAWHF ARIVELNILG FLLPLAAIVF FNYHILASLR TREEVSRTRV RGPKDSKTTA LILTLVVAFL VCWAPYHFFA FLEFLFQVQA VRGCFWEDFI DLGLQLANFF AFTNSSLNPV IYVFVGRLFR TKVWELYKQC TPKSLAPISS SHRKEIFQLF WRN	P	Homo sapiens
47	600	Bradykinin B2 Receptor	NM_000623	atgttctctc cctggaagat atcaatgttt ctgtctgttc gtgaggactc cgtgcccacc acggcctctt tcagcgccga catgctcaat gtcaccttgc aagggcccac tcttaacggg acctttgccc agagcaaatg cccccaagtg gagtggctgg gctggctcaa caccatccag ccccccttcc tctgggtgct gttcgtgctg gccaccctag agaacatctt tgtcctcagc gtcttctgcc tgcacaagag cagctgcacg gtggcagaga tctacctggg gaacctggcc gcagcagacc tgatcctggc ctgcgggctg cccttctggg ccatcaccat ctccaacaac ttcgactggc tctttgggga gacgctctgc cgcgtggtga atgccattat ctccatgaac ctgtacagca gcatctgttt cctgatgctg gtgagcatcg accgctacct ggccctggtg aaaaccatgt ccatgggccg gatgcgcggc gtgcgctggg ccaagctcta cagcttggtg atctgggggt gtacgctgct cctgagctca cccatgctgg tgttccggac catgaaggag tacagcgatg agggccacaa cgtcaccgct tgtgtcatca gctacccatc cctcatctgg gaagtgttca ccaacatgct cctgaatgtc gtgggcttcc tgctgcccct gagtgtcatc accttctgca cgatgcagat catgcaggtg ctgcggaaca acgagatgca gaagttcaag gagatccaga cggagaggag ggccacggtg ctagtcctgg ttgtgctgct gctattcatc atctgctggc tgcccttcca gatcagcacc ttcctggata cgctgcatcg cctcggcatc ctctccagct gccaggacga gcgcatcatc gatgtaatca cacagatcgc ctccttcatg gcctacagca acagctgcct caacccactg gtgtacgtga tcgtgggcaa gcgcttccga aagaagtctt gggaggtgta ccagggagtg tgccagaaag gggctgcag gtcagaaccc attcagatgg agaactccat gggcacactg cggacctcca tctccgtgga acgccagatt cacaaactgc aggactgggc agggagcaga cagtgagcaa acgccagcag ggctgctgtg aatttgtgta aggattgagg gacagttgct tttcagcatg ggcccaggaa tgccaaggag acatctatgc acgaccttgg gaaatgagtt gatgtctccg gtaaaacacc ggagactaat tcctgccctg cccaattttg cagggagcat ggctgtgagg atggggtgaa ctcacgcaca gccaaggact ccaaaatcac aacagcatta ctgttcttat ttgctgccac acctgagcca gcctgctcct tcccaggagt ggaggaggcc tggggggagg gagaggagtg actgagcttc cctcccgtgt gttctccgtc cctgccccag caagacaact tagatctcca ggagaactgc catccagctt tggtgcaatg gctgagtgca caagtgagtt gttgccctgg gtttctttaa tctattcagc tagaactttg aaggacaatt tcttgcatta ataaaggtta agccctgagg ggtccctgat aacaacctgg agaccaggat tttatggctc ccctcactga tggacaagga ggtctgtgcc aaagaagaat ccaataagca catattgagc acttgctgta tatgcagtat tgagcactgt aggcaagacc caagaaagag aaggagccat ctccatcttg aaggaactca aagactcaag tgggaacgac tgggcactgc caccaccaga aagctgttcg acgagacggt cgagcagggt gctgtgggtg atatggacag cagaaggggg agaccaaggt tccagctcaa ccaataacta ttgcacaacc acctgtccct gcctcagttc ccttttatgt aacatgaagt cgttgtgagg gttaaaggca gtaacaggta taaagtactt agaaaagcaa agggtgctac	A	Homo sapiens

				gtacatgtga ggcatcatta cgcagacgta actgggatat gtttactata aggaaaagac actgaggtct agaaatagct ccgtggagca gaatcagtat tgggagccgg tggcggtgtg aagcaccagt gtctggcaca cagtaggtgc tcattggctc ccttccacct gtcattccca ccaccctgag gccccaaccg ccacacacac aggagcattt ggagagaagg ccatgtcttc aaagtctgat ttgtgatgag gcagaggaag atatttctaa tcggtcttgc ccagaggatc acagtgctga gaccccccac caccagccgg tacctgggaa gggggagagt gcaggcctgc tcagggactg ttcctgtctc agcaaccaag ggattgttcc tgtcaatcaa tggtttattg gaaggtggcc cagtatgagc cctagaagag tgtgaaaagg aatggcaatg gtgttcacca tcggcagtgc cagggcagca ctcattcact tgataaatga atatttatta gctggttgga gagctagaac ctggagagct agaacctgga gaactagaac ctggagggct agaacctgga gaggctagaa ccaagaaggg ctagaacctg gaggggctag aacctagaga agctaaaacc tgagctagaa gctggaggac tagaacctgg agggctggaa tctgaagggc tagaacctgg agggctggaa tctggagagc tagaacctgg agggctagaa cctggagggc tagaacctag aagggctaga acctggaggg ctggaatctg gagagctaga acctggaggg ctagaacctg gagggctaga acctagaagg gctagaacct ggagggctag aacctggcag gttagaacct agaagggcta gaacctggag agccagaacc tggagggcta gaacctggaa gggctagaac ctgtagagct agaacatgga gagctagaac ccggcaggct agaacctggc aagctagaac ctggagggaa tgaacctgga gggctagaac ctggagaatg agaaaaattt acatggcaaa gagcccataa atcctgacca atccaactct gaattttaaa gcaaaagcgt gaaaaaaaag attccctcct tacccccaac ccactctttt ttcccaccac ccactctcct ctgcctcagt aagtatctgg aggaagaaaa caggtgaaag aagaagtaaa aaccatttag tattagtatt agaatgaagt caaactgtgc cacacatggt gaatgaaaaa aaaaaaaaag aggctgtgtt ttgtcacaca gggcagtcat tcagcaccag agcacgtgat ggtctgagac tctcttagga gcagagctct gccgcaatgg ccatgtgggg atccacacct ggtctgaggg gcaactgagt ctgcgggaga agagcggccc tatgcatggt gtagatgccc tgataaagaa catctgtcct gtgaaagact caatgagctg ttatgttgta aacaggaagc atttcacatc caaacgagaa aatcatgtaa acatgtgtct tttctgtaga gcataataaa tggatgaggt ttttgcaaaa aaaaaaaaaa aaa		
48	600	Bradykinin B2 Receptor	NP_000614.1	MFSPWKISMF LSVREDSVPT TASFSADMLN VTLQGPTLNG TFAQSKCPQV EWLGWLNTIQ PPFLWVLFVL ATLENIFVLS VFCLHKSSCT VAEIYLGNLA AADLILACGL PFWAITISNN FDWLFGETLC RVVNAIISMN LYSSICFLML VSIDRYLALV KTMSMGRMRG VRWAKLYSLV IWGCTLLLSS PMLVFRTMKE YSDEGHNVTA CVISYPSLIW EVFTNMLLNV VGFLLPLSVI TFCTMQIMQV LRNNEMQKFK EIQTERRATV LVLVVLLLFI ICWLPFQIST FLDTLHRLGI LSSCQDERII DVITQIASFM AYSNSCLNPL VYVIVGKRFR KKSWEVYQGV CQKGGCRSEP IQMENSMGTL RTSISVERQI HKLQDWAGSR Q	P	Homo sapiens
49	635	Beta-1 adrenoceptor	NM_000684	tgctacccgc gcccgggctt ctggggtgtt ccccaaccac ggcccagccc tgccacaccc cccgcccccg gcctccgcag ctcggcatgg gcgcgggggt gctcgtcctg ggcgcctccg agcccggtaa cctgtcgtcg gccgcaccgc tccccgacgg cgcggccacc gcggcgcggc tgctggtgcc cgcgtcgccg cccgcctcgt tgctgcctcc cgccagcgaa agccccgagc cgctgtctca gcagtggaca gcgggcatgg gtctgctgat ggcgctcatc gtgctgctca tcgtggcggg caatgtgctg gtgatcgtgg ccatcgccaa gacgccgcgg ctgcagacgc	A	Homo sapiens

				tcaccaacct cttcatcatg tccctggcca gcgccgacct ggtcatgggg ctgctggtgg tgccgttcgg ggccaccatc gtggtgtggg gccgctggga gtacggctcc ttcttctgcg agctgtggac ctcagtggac gtgctgtgcg tgacggccag catcgagacc ctgtgtgtca ttgccctgga ccgctacctc gccatcacct cgcccttccg ctaccagagc ctgctgacgc gcgcgcgggc gcggggcctc gtgtgcaccg tgtgggccat ctcggccctg gtgtccttcc tgcccatcct catgcactgg tggcgggcgg agagcgacga ggcgcgccgc tgctacaacg accccaagtg ctgcgacttc gtcaccaacc gggcctacgc catcgcctcg tccgtagtct ccttctacgt gcccctgtgc atcatggcct tcgtgtacct gcgggtgttc cgcgaggccc agaagcaggt gaagaagatc gacagctgcg agcgccgttt cctcggcggc ccagcgcggc cgccctcgcc ctcgccctcg cccgtccccg cgcccgcgcc gccgcccgga cccccgcgcc ccgccgccgc cgccgccacc gccccgctgg ccaacgggcg tgcgggtaag cggcggccct cgcgcctcgt ggccctacgc gagcagaagg cgctcaagac gctgggcatc atcatgggcg tcttcacgct ctgctggctg cccttcttcc tggccaacgt ggtgaaggcc ttccaccgcg agctggtgcc cgaccgcctc ttcgtcttct tcaactggct gggctacgcc aactcggcct tcaaccccat catctactgc cgcagccccg acttccgcaa ggccttccag ggactgctct gctgcgcgcg cagggctgcc cgccggcgcc acgcgaccca cggagaccgg ccgcgcgcct cgggctgtct ggcccggccc ggacccccgc catcgcccgg ggccgcctcg gacgacgacg acgacgatgt cgtcggggcc acgccgcccg cgcgcctgct ggagccctgg gccggctgca acggcggggc ggcggcggac agcgactcga gcctggacga gccgtgccgc cccggcttcg cctcggaatc caaggtgtag ggcccggcgc ggggcgcgga ctccgggcac ggcttcccag gggaacgagg agatctgtgt ttacttaaga ccgatagcag gtgaactcga agcccacaat cctcgtctga atcatccgag gcaaagagaa aagccacgga ccgttgcaca aaaaggaaag tttgggaagg gatgggagag tggcttgctg atgttccttg ttg		
50	635	Beta-1 adrenoceptor	NP_000675.1	MGAGVLVLGA SEPGNLSSAA PLPDGAATAA RLLVPASPPA SLLPPASESP EPLSQQWTAG MGLLMALIVL LIVAGNVLVI VAIAKTPRLQ TLTNLFIMSL ASADLVMGLL VVPFGATIVV WGRWEYGSFF CELWTSVDVL CVTASIETLC VIALDRYLAI TSPFRYQSLL TRARARGLVC TVWAISALVS FLPILMHWWR AESDEARRCY NDPKCCDFVT NRAYAIASSV VSFYVPLCIM AFVYLRVFRE AQKQVKKIDS CERRFLGGPA RPPSPSPSPV PAPAPPPGPP RPAAAAATAP LANGRAGKRR PSRLVALREQ KALKTLGIIM GVFTLCWLPF FLANVVKAFH RELVPDRLFV FFNWLGYANS AFNPIIYCRS PDFRKAFQGL LCCARRAARR RHATHGDRPR ASGCLARPGP PPSPGAASDD DDDDVVGATP PARLLEPWAG CNGGAAADSD SSLDEPCRPG FASESKV	P	Homo sapiens
51	640	Beta-2 adrenoceptor	NM_000024	actgcgaagc ggcttcttca gagcacgggc tggaactggc aggcaccgcg agcccctagc acccgacaag ctgagtgtgc aggacgagtc cccaccacac ccacaccaca gccgctgaat gaggcttcca ggcgtccgct cgcggcccgc agagccccgc cgtgggtccg cccgctgagg cgcccccagc cagtgcgctt acctgccaga ctgcgcgcca tggggcaacc cgggaacggc agcgccttct tgctggcacc caatagaagc catgcgccgg accacgacgt cacgcagcaa agggacgagg tgtgggtggt gggcatgggc atcgtcatgt ctctcatcgt cctggccatc gtgtttggca atgtgctggt catcacagcc attgccaagt tcgagcgtct gcagacggtc accaactact tcatcacttc actggcctgt gctgatctgg tcatgggcct ggcagtggtg ccctttgggg ccgcccatat tcttatgaaa atgtggactt ttggcaactt ctggtgcgag ttttggactt ccattgatgt gctgtgcgtc acggccagca ttgagaccct gtgcgtgatc	A	Homo sapiens

				gcagtggatc gctactttgc cattacttca cctttcaagt accagagcct gctgaccaag aataaggccc gggtgatcat tctgatggtg tggattgtgt caggccttac ctccttcttg cccattcaga tgcactggta ccgggccacc caccaggaag ccatcaactg ctatgccaat gagacctgct gtgacttctt cacgaaccaa gcctatgcca ttgcctcttc catcgtgtcc ttctacgttc ccctggtgat catggtcttc gtctactcca gggtctttca ggaggccaaa aggcagctcc agaagattga caaatctgag ggccgcttcc atgtccagaa ccttagccag gtggagcagg atgggcggac ggggcatgga ctccgcagat cttccaagtt ctgcttgaag gagcacaaag ccctcaagac gttaggcatc atcatgggca ctttcaccct ctgctggctg cccttcttca tcgttaacat tgtgcatgtg atccaggata acctcatccg taaggaagtt tacatcctcc taaattggat aggctatgtc aattctggtt tcaatcccct tatctactgc cggagcccag atttcaggat tgccttccag gagcttctgt gcctgcgcag gtcttctttg aaggcctatg ggaatggcta ctccagcaac ggcaacacag gggagcagag tggatatcac gtggaacagg agaaagaaaa taaactgctg tgtgaagacc tcccaggcac ggaagacttt gtgggccatc aaggtactgt gcctagcgat aacattgatt cacaagggag gaattgtagt acaaatgact cactgctgta aagcagtttt tctactttta aagacccccc cccccccaac agaacactaa acagactatt taacttgagg gtaataaact tagaataaaa ttgtaaaaat tgtatagaga tatgcagaag gaagggcatc cttctgcctt ttttattttt ttaagctgta aaaagagaga aaacttattt gagtgattat ttgttatttg tacagttcag ttcctctttg catggaattt gtaagtttat gtctaaagag ctttagtcct agaggacctg agtctgctat attttcatga cttttccatg tatctacctc actattcaag tattaggggt aatatattgc tgctggtaat ttgtatctga aggagatttt ccttcctaca cccttggact tgaggatttt gagtatctcg gacctttcag ctgtgaacat ggactcttcc cccactcctc ttatttgctc acacggggta ttttaggcag ggatttgagg agcagcttca gttgttttcc cgagcaaagg tctaaagttt acagtaaata aaatgtttga ccatg		
52	640	Beta-2 adrenoceptor	NP_000015.1	MGQPGNGSAF LLAPNRSHAP DHDVTQQRDE VWVVGMGIVM SLIVLAIVFG NVLVITAIAK FERLQTVTNY FITSLACADL VMGLAVVPFG AAHILMKMWT FGNFWCEFWT SIDVLCVTAS IETLCVIAVD RYFAITSPFK YQSLLTKNKA RVIILMVWIV SGLTSFLPIQ MHWYRATHQE AINCYANETC CDFFTNQAYA IASSIVSFYV PLVIMVFVYS RVFQEAKRQL QKIDKSEGRF HVQNLSQVEQ DGRTGHGLRR SSKFCLKEHK ALKTLGIIMG TFTLCWLPFF IVNIVHVIQD NLIRKEVYIL LNWIGYVNSG FNPLIYCRSP DFRIAFQELL CLRRSSLKAY GNGYSSNGNT GEQSGYHVEQ EKENKLLCED LPGTEDFVGH QGTVPSDNID SQGRNCSTND SLL	P	Homo sapiens
53	643	Beta-3 adrenoceptor	NM_000025	gctactcctc ccccaagagc ggtggcaccg agggagttgg ggtgggggga ggctgagcgc tctggctggg acagctagag aagatggccc aggctgggga agtcgctctc atgccttgct gtcccctccc ctgagccagg tgatttggga gaccccctcc ttccttcttt ccctaccgcc ccacgcgcga cccggggatg gctccgtggc ctcacgagaa cagctctctt gccccatggc cggacctccc caccctggcg cccaataccg ccaacaccag tgggctgcca ggggttccgt gggaggcggc cctagccggg gccctgctgg cgctggcggt gctggccacc gtgggaggca acctgctggt catcgtggcc atcgcctgga ctccgagact ccagaccatg accaacgtgt tcgtgacttc gctggccgca gccgacctgg tgatgggact cctggtggtg ccgccggcgg ccaccttggc gctgactggc cactggccgt tgggcgccac tggctgcgag ctgtggacct cggtggacgt gctgtgtgtg accgccagca tcgaaaccct gtgcgccctg gccgtggacc	A	Homo sapiens

				gctacctggc tgtgaccaac ccgctgcgtt acggcgcact ggtcaccaag cgctgcgccc ggacagctgt ggtcctggtg tgggtcgtgt cggccgcggt gtcgtttgcg cccatcatga gccagtggtg gcgcgtaggg gccgacgccg aggcgcagcg ctgccactcc aacccgcgct gctgtgcctt cgcctccaac atgccctacg tgctgctgtc ctcctccgtc tccttctacc ttcctcttct cgtgatgctc ttcgtctacg cgcgggtttt cgtggtggct acgcgccagc tgcgcttgct gcgcggggag ctgggccgct ttccgcccga ggagtctccg ccggcgccgt cgcgctctct ggccccggcc ccggtgggga cgtgcgctcc gcccgaaggg gtgcccgcct gcggccggcg gcccgcgcgc ctcctgcctc tccgggaaca ccgggccctg tgcaccttgg gtctcatcat gggcaccttc actctctgct ggttgccctt ctttctggcc aacgtgctgc gcgccctggg gggcccctct ctagtcccgg gcccggcttt ccttgccctg aactggctag gttatgccaa ttctgccttc aacccgctca tctactgccg cagcccggac tttcgcagcg ccttccgccg tcttctgtgc cgctgcggcc gtcgcctgcc tccggagccc tgcgccgccg cccgcccggc cctcttcccc tcgggcgttc ctgcggcccg gagcagccca gcgcagccca ggctttgcca acggctcgac ggggcttctt ggggagtttc ttaggcctga aggacaagaa gcaacaactc tgttgatcag aacctgtgga aaacctctgg cctctgttca gaatgagtcc catgggattc cccggctgtg acactctacc ctccagaacc tgacgactgg gccatgtgac ccaaggaggg atccttacca agtgggtttt caccatcctc ttgctctctg tctgagagat gttttctaaa ccccagcctt gaacttcact cctccctcag tggtagtgtc caggtgccgt ggagcagcag gctggctttg gtaggggcac ccatcacccg gcttgcctgt gcagtcagtg agtgcttagg gcaaagagag ctcccctggt tccattcctt ctgccaccca aaccctgatg agaccttagt gttctccagg ctctgtggcc caggctgaga gcagcagggt agaaaagacc aagatttggg gttttatctc tggttccctt attactgctc tcaagcagtg gcctctctca ctttagccat ggaatggctc cgatctacct cacagcagtg tcagaaggac ttcgccaggg ttttgggagc tccagggttc ataagaaggt gaaccattag aacagatccc ttcttttcct tttgcaatca gataaataaa tatcactgaa tgcagttcat cctcggccca ctttccctcc gtttgttttc ttttcataat ccacttactc ccttcccttc tactctgcgc tggcttttga cagaggcagt aaattaggcc taatcctcac tcttttcttc ctaatcttca tcaaacaaaa aatgaaaagt ctgtctggac gaaggggagt gagcttgagc ctttgatatc ttgctccccc acccttcctg aaactcttga aatccagttg ccattgagta gcaaagccac gctccccaca ggacttggac agagggccca caggggggatg ggctggctgt ggccaggttt agggcagggg gcatttgtcc cctccatgct ataatccagt ggtgccttac atggtgtgtg tgtgtgtgtg tgcgtgtgtg tgtgtgtgtg tgtgtctgga ggcacaggca caaagcattg cttgggttgg tcaaatgtct tgtgtcataa atatattctg atgtttccca gcctttccac aacctctacc ttcccactca ccttccccag ctacaaaaat ctgtattatc ctcttaaagt aaaactggag ttac		
54	643	Beta-3 adrenoceptor	NP_000016.1	MAPWPHENSS LAPWPDLPTL APNTANTSGL PGVPWEAALA GALLALAVLA TVGGNLLVIV AIAWTPRLQT MTNVFVTSLA AADLVMGLLV VPPAATLALT GHWPLGATGC ELWTSVDVLC VTASIETLCA LAVDRYLAVT NPLRYGALVT KRCARTAVVL VWVVSAAVSF APIMSQWWRV GADAEAQRCH SNPRCCAFAS NMPYVLLSSS VSFYLPLLVM LFVYARVFVV ATRQLRLLRG ELGRFPPEES PPAPSRSLAP APVGTCAPPE GVPACGRRPA RLLPLREHRA LCTLGLIMGT FTLCWLPFFL ANVLRALGGP SLVPGPAFLA LNWLGYANSA FNPLIYCRSP DFRSAFRRLL	P	Homo sapiens

				CRCGRRLPPE PCAAARPALF PSGVPAARSS PAQPRLCQRL DGASWGVS		
55	688	Opsin, blue-sensitive	NM_001708	ggcatccatg agaaaaatgt cggaggaaga gttttatctg ttcaaaaata tctcttcagt ggggccgtgg gatgggcctc agtaccacat tgcccctgtc tgggccttct acctccaggc agctttcatg ggcactgtct tccttatagg gttcccactc aatgccatgg tgctggtggc cacactgcgc tacaaaaagt tgcggcagcc cctcaactac attctggtca acgtgtcctt cggaggcttc ctcctctgca tcttctctgt cttccctgtc ttcgtcgcca gctgtaacgg atacttcgtc ttcggtcgcc atgtttgtgc tttggagggc ttcctgggca ctgtagcagg tctggttaca ggatggtcac tggccttcct ggcctttgag cgctacattg tcatctgtaa gcccttcggc aacttccgct tcagctccaa gcatgcactg acggtggtcc tggctacctg gaccattggt attggcgtct ccatcccacc cttctttggc tggagccggt tcatccctga gggcctgcag tgttcctgtg gccctgactg gtacaccgtg ggcaccaaat accgcagcga gtcctatacg tggttcctct tcatcttctg cttcattgtg cctctctccc tcatctgctt ctcctacact cagctgctga gggccctgaa agctgttgca gctcagcagc aggagtcagc tacgacccag aaggctgaac gggaggtgag ccgcatggtg gttgtgatgg taggatcctt ctgtgtctgc tacgtgccct acgcggcctt cgccatgtac atggtcaaca accgtaacca tgggctggac ttacggcttg tcaccattcc ttcattcttc tccaagagtg cttgcatcta caatcccatc atctactgct tcatgaataa gcagttccaa gcttgcatca tgaagatggt gtgtgggaag gccatgacag atgaatccga cacatgcagc tcccagaaaa cagaagtttc tactgtctcg tctacccaag ttggccccaa ctgaggaccc aatattggcc tgtttgcaac agctagaatt aaattttact t	A	Homo sapiens
56	688	Opsin, blue-sensitive	NP_001699.1	MRKMSEEEFY LFKNISSVGP WDGPQYHIAP VWAFYLQAAF MGTVFLIGFP LNAMVLVATL RYKKLRQPLN YILVNVSFGG FLLCIFSVFP VFVASCNGYF VFGRHVCALE GFLGTVAGLV TGWSLAFLAF ERYIVICKPF GNFRFSSKHA LTVVLATWTI GIGVSIPPFF GWSRFIPEGL QCSCGPDWYT VGTKYRSESY TWFLFIFCFI VPLSLICFSY TQLLRALKAV AAQQQESATT QKAEREVSRM VVVMVGSFCV CYVPYAAFAM YMVNNRNHGL DLRLVTIPSF FSKSACIYNP IIYCFMNKQF QACIMKMVCG KAMTDESDTC SSQKTEVSTV SSTQVGPN	P	Homo sapiens
57	692	Bombesin Receptor Subtype-3	NM_001727	gagtatctgg atgtcttgga ttttcttccc attctgttct gttctgttct cctaatacca tctcgttact agacgtaggc attggacgtg acaatcaact gcatttgaac tgagaagaag aaatattaaa gacacagtct tcagaagaaa tggctcaaag gcagcctcac tcacctaatc agactttaat ttcaatcaca aatgacacag aatcatcaag ctctgtggtt tctaacgata acacaaataa aggatggagc ggggacaact ctccaggaat agaagcattg tgtgccatct atattactta tgctgtgatc atttcagtgg gcatccttgg aaatgctatt ctcatcaaag tctttttcaa gaccaaatcc atgcaaacag ttccaaatat tttcatcacc agcctggctt ttggagatct tttacttctg ctaacttgtg tgccagtgga tgcaactcac taccttgcag aaggatggct gttcggaaga attggttgta aggtgctctc tttcatccgg ctcacttctg ttggtgtgtc agtgttcaca ttaacaattc tcagcgctga cagatacaag gcagttgtga agccacttga gcgacagccc tccaatgcca tcctgaagac ttgtgtaaaa gctggctgcg tctggatcgt gtctatgata tttgctctac ctgaggctat attttcaaat gtatacactt ttcgagatcc caataaaaat atgacatttg aatcatgtac ctcttatcct gtctctaaga agctcttgca agaaatacat tctctgctgt gcttcttagt gttctacatt attccactct ctattatctc tgtctactat tccttgattg ctaggaccct ttacaaaagc accctgaaca	A	Homo sapiens

				tacctactga ggaacaaagc catgcccgta agcagattga atcccgaaag agaattgcca gaacggtatt ggtgttggtg gctctgtttg ccctctgctg gttgccaaat cacctcctgt acctctacca ttcattcact tctcaaacct atgtagaccc ctctgccatg catttcattt tcaccatttt ctctcgggtt ttggctttca gcaattcttg cgtaaacccc tttgctctct actggctgag caaaagcttc cagaagcatt ttaaagctca gttgttctgt tgcaaggcgg agcggcctga gcctcctgtt gctgacacct ctcttaccac cctggctgtg atgggaacgg tcccgggcac tgggagcata cagatgtctg aaattagtgt gacctcgttc actgggtgta gtgtgaagca ggcagaggac agattctagc ttttcaagga aaaatgctgc ttctcctccc agcgtgtgta tccgactcta agctgtgtgc agg		
58	692	Bombesin Receptor Subtype-3	NP_001718.1	MAQRQPHSPN QTLISITNDT ESSSSVVSND NTNKGWSGDN SPGIEALCAI YITYAVIISV GILGNAILIK VFFKTKSMQT VPNIFITSLA FGDLLLLLTC VPVDATHYLA EGWLFGRIGC KVLSFIRLTS VGVSVFTLTI LSADRYKAVV KPLERQPSNA ILKTCVKAGC VWIVSMIFAL PEAIFSNVYT FRDPNKNMTF ESCTSYPVSK KLLQEIHSLL CFLVFYIIPL SIISVYYSLI ARTLYKSTLN IPTEEQSHAR KQIESRKRIA RTVLVLVALF ALCWLPNHLL YLYHSFTSQT YVDPSAMHFI FTIFSRVLAF SNSCVNPFAL YWLSKSFQKH FKAQLFCCKA ERPEPPVADT SLTTLAVMGT VPGTGSIQMS EISVTSFTGC SVKQAEDRF	P	Homo sapiens
59	729	CXC Chemokine Receptor 5	NM_001716	gctgccacct ctctagaggc acctggcggg gagcctctca acataagaca gtgaccagtc tggtgactca cagccggcac agccatgaac tacccgctaa cgctggaaat ggacctcgag aacctggagg acctgttctg ggaactggac agattggaca actataacga cacctccctg gtggaaaatc atctctgccc tgccacagag gggcccctca tggcctcctt caaggccgtg ttcgtgcccg tggcctacag cctcatcttc ctcctgggcg tgatcggcaa cgtcctggtg ctggtgatcc tggagcggca ccggcagaca cgcagttcca cggagacctt cctgttccac ctggccgtgg ccgacctcct gctggtcttc atcttgccct ttgccgtggc cgagggctct gtgggctggg tcctggggac cttcctctgc aaaactgtga ttgccctgca caaagtcaac ttctactgca gcagcctgct cctggcctgc atcgccgtgg accgctacct ggccattgtc cacgccgtcc atgcctaccg ccaccgccgc ctcctctcca tccacatcac ctgtgggacc atctggctgg tgggcttcct ccttgccttg ccagagattc tcttcgccaa agtcagccaa ggccatcaca acaactccct gccacgttgc accttctccc aagagaacca agcagaaacg catgcctggt tcacctcccg attcctctac catgtggcgg gattcctgct gcccatgctg gtgatgggct ggtgctacgt gggggtagtg cacaggttgc gccaggccca gcggcgccct cagcggcaga aggcagtcag ggtggccatc ctggtgacaa gcatcttctt cctctgctgg tcaccctacc acatcgtcat cttcctggac accctggcga ggctgaaggc cgtggacaat acctgcaagc tgaatggctc tctccccgtg gccatcacca tgtgtgagtt cctgggcctg gcccactgct gcctcaaccc catgctctac actttcgccg gcgtgaagtt ccgcagtgac ctgtcgcggc tcctgacgaa gctgggctgt accggccctg cctccctgtg ccagctcttc cctagctggc gcaggagcag tctctctgag tcagagaatg ccacctctct caccacgttc taggtcccag tgtccccttt tattgctgct ttccttgggg gcaggcagtg atgctggatg ctccttccaa caggagctgg gatcctaagg gctcaccgtg gctaagagtg tcctaggagt atcctcattt ggggtagcta gaggaaccaa cccccatttc tagaacatcc ctgccagctc ttctgccggc cctggggcta ggctggagcc cagggagcgg aaagcagctc aaaggcacag tgaaggctgt ccttacccat ctgcaccccc ctgggctgag agaacctcac gcacctccca	A	Homo sapiens

				tcctaatcat ccaatgctca agaaacaact tctacttctg cccttgccaa cggagagcgc ctgcccctcc cagaacacac tccatcagct taggggctgc tgacctccac agcttcccct ctctcctcct gcccacctgt caaacaaagc cagaagctga gcaccagggg atgagtggag gttaaggctg aggaaaggcc agctggcagc agagtgtggc cttcggacaa ctcagtccct aaaaacacag acattctgcc aggcccccaa gcctgcagtc atcttgacca agcaggaagc tcagactggt tgagttcagg tagctgcccc tggctctgac cgaaacagcg ctgggtccac cccatgtcac cggatcctgg gtggtctgca ggcagggctg actctaggtg cccttggagg ccagccagtg acctgaggaa gcgtgaaggc cgagaagcaa gaaagaaacc cgacagaggg aagaaaagag ctttcttccc gaaccccaag gagggagatg gatcaatcaa acccggcggt cccctccgcc aggcgagatg gggtggggtg gagaactcct agggtggctg ggtccagggg atgggaggtt gtgggcattg atggggaagg aggctggctt gtcccctcct cactcccttc ccataagcta tagacccgag gaaactcaga gtcggaacgg agaaaggtgg actggaaggg gcccgtggga gtcatctcaa ccatcccctc cgtggcatca ccttaggcag ggaagtgtaa gaaacacact gaggcaggga agtccccagg ccccaggaag ccgtgccctg cccccgtgag gatgtcactc agatggaacc gcaggaagct gctccgtgct tgtttgctca cctggggtgt gggaggcccg tccggcagtt ctgggtgctc cctaccacct ccccagcctt tgatcaggtg gggagtcagg gacccctgcc cttgtcccac tcaagccaag cagccaagct ccttgggagg ccccactggg gaaataacag ctgtggctca cgtgagagtg tcttcacggc aggacaacga ggaagcccta agacgtccct tttttctctg agtatctcct cgcaagctgg gtaatcgatg ggggagtctg aagcagatgc aaagaggcaa gaggctggat tttgaatttt ctttttaata aaaaggcacc tataaaacag gtcaatacag tacaggcagc acagagaccc ccggaacaag cctaaaaatt gtttcaaaat aaaaaccaag aagatgtctt caaaaaaaaa aaaaaaaaaa aaaa		
60	729	CXC Chemokine Receptor 5	NP_001707.1	MNYPLTLEMD LENLEDLFWE LDRLDNYNDT SLVENHLCPA TEGPLMASFK AVFVPVAYSL IFLLGVIGNV LVLVILERHR QTRSSTETFL FHLAVADLLL VFILPFAVAE GSVGWVLGTF LCKTVIALHK VNFYCSSLLL ACIAVDRYLA IVHAVHAYRH RRLLSIHITC GTIWLVGFLL ALPEILFAKV SQGHHNNSLP RCTFSQENQA ETHAWFTSRF LYHVAGFLLP MLVMGWCYVG VVHRLRQAQR RPQRQKAVRV AILVTSIFFL CWSPYHIVIF LDTLARLKAV DNTCKLNGSL PVAITMCEFL GLAHCCLNPM LYTFAGVKFR SDLSRLLTKL GCTGPASLCQ LFPSWRRSSL SESENATSLT TF	P	Homo sapiens
61	735	C-C Chemokine Receptor 1	NM_001295	ggcacgagcc cagaaacaaa gacttcacgg acaaagtccc ttggaaccag agagaagccg ggatggaaac tccaaacacc acagaggact atgacacgac cacagagttt gactatgggg atgcaactcc gtgccagaag gtgaacgaga gggcctttgg ggcccaactg ctgccccctc tgtactcctt ggtatttgtc attggcctgg ttggaaacat cctggtggtc ctggtccttg tgcaatacaa gaggctaaaa aacatgacca gcatctacct cctgaacctg gccatttctg acctgctctt cctgttcacg cttcccttct ggatcgacta caagttgaag gatgactggg tttttggtga tgccatgtgt aagatcctct ctgggtttta ttacacaggc ttgtacagcg agatcttttt catcatcctg ctgacgattg acaggtacct ggccatcgtc cacgccgtgt ttgccttgcg ggcacggacc gtcactttg gtgtcatcac cagcatcatc atttggccc tggccatctt ggcttccatg ccaggcttat acttttccaa gacccaatgg gaattcactc accacacctg cagccttcac tttcctcacg aaagcctacg agagtggaag ctgtttcagg	A	Homo sapiens

				ctctgaaact gaacctcttt gggctggtat tgcctttgtt ggtcatgatc atctgctaca cagggattat aaagattctg ctaagacgac caaatgagaa gaaatccaaa gctgtccgtt tgatttttgt catcatgatc atcttttttc tcttttggac cccctacaat ttgactatac ttatttctgt tttccaagac ttcctgttca cccatgagtg tgagcagagc agacatttgg acctggctgt gcaagtgacg gaggtgatcg cctacacgca ctgctgtgtc aacccagtga tctacgcctt cgttggtgag aggttccgga agtacctgcg gcagttgttc cacaggcgtg tggctgtgca cctggttaaa tggctcccct tcctctccgt ggacaggctg gagagggtca gctccacatc tccctccaca ggggagcatg aactctctgc tgggttctga ctcagaccat aggaggccaa cccaaaataa gcaggcgtga cctgccaggc acactgagcc agcagcctgg ctctcccagc caggttctga ctcttggcac agcatggagt cacagccact tgggatagag agggaatgta atggtggcct ggggcttctg aggcttctgg ggcttcagtc ttttccatga acttctcccc tggtagaaag aagatgaatg agcaaaacca aatattccag agactgggac taagtgtacc agagaagggc ttggactcaa gcaagatttc agatttgtga ccattagcat ttgtcaacaa agtcacccac ttcccactat tgcttgcaca aaccaattaa acccagtagt ggtgactgtg ggctccattc aaagtgagct cctaagccat gggagacact gatgtatgag gaatttctgt tcttccatca cctccccccc cccgccaccc tcccactgcc aagaacttgg aaatagtgat ttccacagtg actccactct gagtcccaga gccaatcagt agccagcatc tgcctcccct tcactcccac cgcaggattt gggctcttgg aatcctgggg aacatagaac tcatgacgga agagttgaga cctaacgaga aatagaaatg gggaactac tgctggcagt ggaactaaga aagcccttag gaagaatttt tatatccact aaaatcaaac aattcaggga gtgggctaag cacgggccat atgaataaca tggtgtgctt cttaaaatag ccataaaggg gagggactca tcatttccat ttacccttct tttctgacta tttttcagaa tctctcttct tttcaagttg ggtgatatgt tggtagattc taatggcttt attgcagcga ttaataacag gcaaaaggaa gcagggttgg tttcccttct ttttgttctt catctaagcc ttctggtttt atgggtcaga gttccgactg ccatcttgga cttgtcagca aaaaaaaaaa aaaaaa		
62	735	C-C Chemokine Receptor 1	NP_001286.1	METPNTTEDY DTTTEFDYGD ATPCQKVNER AFGAQLLPPL YSLVFVIGLV GNILVVLVLV QYKRLKNMTS IYLLNLAISD LLFLFTLPFW IDYKLKDDWV FGDAMCKILS GFYYTGLYSE IFFIILLTID RYLAIVHAVF ALRARTVTFG VITSIIIWAL AILASMPGLY FSKTQWEFTH HTCSLHFPHE SLREWKLFQA LKLNLFGLVL PLLVMIICYT GIIKILLRRP NEKKSKAVRL IFVIMIIFFL FWTPYNLTIL ISVFQDFLFT HECEQSRHLD LAVQVTEVIA YTHCCVNPVI YAFVGERFRK YLRQLFHRRV AVHLVKWLPF LSVDRLERVS STSPSTGEHE LSAGF	P	Homo sapiens
63	737	C-C Chemokine Receptor 3	NM_001837	tttttcttct tctatcacag ggagaagtga aatgacaacc tcactagata cagttgagac ctttggtacc acatcctact atgatgacgt gggcctgctc tgtgaaaaag ctgataccag agcactgatg gcccagtttg tgcccccgct gtactccctg gtgttcactg tgggcctctt gggcaatgtg gtggtggtga tgatcctcat aaaatacagg aggctccgaa ttatgaccaa catctacctg ctcaacctgg ccatttcgga cctgctcttc ctcgtcaccc ttccattctg gatccactat gtcagggggc ataactgggt tttggccat ggcatgtgta agctcctctc aggttttat cacacaggct tgtacagcga gatcttttc ataatcctgc tgacaatcga caggtacctg gccattgtcc atgctgtgtt tgcccttcga gcccggactg tcacttttgg tgtcatcacc agcatcgtca cctggggcct ggcagtgcta gcagctcttc ctgaatttat cttctatgag actgaagagt tgtttgaaga gactctttgc agtgctcttt acccagagga	A	Homo sapiens

				tacagtatat agctggaggc atttccacac tctgagaatg accatcttct gtctcgttct ccctctgctc gttatggcca tctgctacac aggaatcatc aaaacgctgc tgaggtgccc cagtaaaaaa aagtacaagg ccatccggct catttttgtc atcatggcgg tgtttttcat tttctggaca ccctacaatg tggctatcct tctctcttcc tatcaatcca tcttatttgg aaatgactgt gagcggagca agcatctgga cctggtcatg ctggtgacag aggtgatcgc ctactcccac tgctgcatga acccggtgat ctacgccttt gttggagaga ggttccggaa gtacctgcgc cacttcttcc acaggcactt gctcatgcac ctgggcagat acatcccatt ccttcctagt gagaagctgg aaagaaccag ctctgtctct ccatccacag cagagccgga actctctatt gtgttttagg tcagatgcag aaaattgcct aaagaggaag gaccaaggag atgaagcaaa cacattaagc cttccacact cacctctaaa acagtccttc aaacttccag t		
64	737	C-C Chemokine Receptor 3	NP_001828.1	MTTSLDTVET FGTTSYYDDV GLLCEKADTR ALMAQFVPPL YSLVFTVGLL GNVVVVMILI KYRRLRIMTN IYLLNLAISD LLFLVTLPFW IHYVRGHNWV FGHGMCKLLS GFYHTGLYSE IFFIILLTID RYLAIVHAVF ALRARTVTFG VITSIVTWGL AVLAALPEFI FYETEELFEE TLCSALYPED TVYSWRHFHT LRMTIFCLVL PLLVMAICYT GIIKTLLRCP SKKKYKAIRL IFVIMAVFFI FWTPYNVAIL LSSYQSILFG NDCERSKHLD LVMLVTEVIA YSHCCMNPVI YAFVGERFRK YLRHFFHRHL LMHLGRYIPF LPSEKLERTS SVSPSTAEPE LSIVF	P	Homo sapiens
65	738	C-C Chemokine Receptor 4	NM_005508	cggggggtttt gatcttcttc cccttctttt cttccccttc ttctttcctt cctccctccc tctctcattt cccttctcct tctccctcag tctccacatt caacattgac aagtccattc agaaaagcaa gctgcttctg gttgggccca gacctgcctt gaggagcctg tagagttaaa aaatgaaccc cacggatata gcagatacca ccctcgatga aagcatatac agcaattact atctgtatga aagtatcccc aagccttgca ccaaagaagg catcaaggca tttggggagc tcttcctgcc cccactgtat tccttggttt ttgtatttgg tctgcttgga aattctgtgg tggttctggt cctgttcaaa tacaagcggc tcaggtccat gactgatgtg tacctgctca accttgccat ctcggatctg ctcttcgtgt tttccctccc tttttggggc tactatgcag cagaccagtg ggtttttggg ctaggtctgt gcaagatgat ttcctggatg tacttggtgg gcttttacag tggcatattc tttgtcatgc tcatgagcat tgatagatac ctggcgatag tgcacgcggt gttttccttg agggcaagga ccttgactta tggggtcatc accagtttgg ctacatggtc agtggctgtg ttcgcctccc ttcctggctt tctgttcagc acttgttata ctgagcgcaa ccatacctac tgcaaaacca agtactctct caactccacg acgtggaagg ttctcagctc cctggaaatc aacattctcg gattggtgat ccccttaggg atcatgctgt tttgctactc catgatcatc aggaccttgc agcattgtaa aaatgagaag aagaacaagg cggtgaagat gatctttgcc gtggtggtcc tcttccttgg gttctggaca ccttacaaca tagtgctctt cctagagacc ctggtggagc tagaagtcct tcaggactgc acctttgaaa gatacttgga ctatgccatc caggccacag aaactctggc ttttgttcac tgctgcctta atcccatcat ctactttttt ctgggggaga aatttcgcaa gtacatccta cagctcttca aaacctgcag ggcctttttt gtgctctgcc aatactgtgg gctcctccaa atttactctg ctgacacccc cagctcatct tacacgcagt ccaccatgga tcatgatctt catgatgctc tgtaggaaaa atgaaatggt gaaatgcaga gtcaatgaac ttttccacat tcagagctta ctttaaaatt ggtattttta ggtaagagat ccctgagcca gtgtcaggag gaaggcttac acccacagtg gaaagacagc ttctcatcct gcaggcagct tttctctccc cactagacaa	A	Homo sapiens

				gtccagcctg gcaagggttc acctgggctg aggcatcctt cctcacacca ggcttgcctg caggcatgag tcagtctgat gagaactctg agcagtgctt gaatgaagtt gtaggtaata ttgcaaggca aagactattc ccttctaacc tgaactgatg ggtttctcca gagggaattg cagagtactg gctgatggag taaatcgcta ccttttgctg tggcaaatgg gcccccg		
66	738	C-C Chemokine Receptor 4	NP_005499.1	MNPTDIADTT LDESIYSNYY LYESIPKPCT KEGIKAFGEL FLPPLYSLVF VFGLLGNSVV VLVLFKYKRL RSMTDVYLLN LAISDLLFVF SLPFWGYYAA DQWVFGLGLC KMISWMYLVG FYSGIFFVML MSIDRYLAIV HAVFSLRART LTYGVITSLA TWSVAVFASL PGFLFSTCYT ERNHTYCKTK YSLNSTTWKV LSSLEINILG LVIPLGIMLF CYSMIIRTLQ HCKNEKKNKA VKMIFAVVVL FLGFWTPYNI VLFLETLVEL EVLQDCTFER YLDYAIQATE TLAFVHCCLN PIIYFFLGEK FRKYILQLFK TCRGLFVLCQ YCGLLQIYSA DTPSSSYTQS TMDHDLHDAL	P	Homo sapiens
67	741	C-C Chemokine Receptor 7	NM_001838	gtgagacagg ggtagtgcga ggccgggcac agccttcctg tgtggtttta ccgcccagag agcgtcatgg acctggggaa accaatgaaa agcgtgctgg tggtggctct ccttgtcatt ttccaggtat gcctgtgtca agatgaggtc acggacgatt acatcggaga caacaccaca gtggactaca ctttgttcga gtctttgtgc tccaagaagg acgtgcggaa ctttaaagcc tggttcctcc ctatcatgta ctccatcatt tgtttcgtgg gcctactggg caatgggctg gtcgtgttga cctatatcta tttcaagagg ctcaagacca tgaccgatac ctacctgctc aacctggcgg tggcagacat cctcttcctc ctgacccttc ccttctgggc ctacagcgcg gccaagtcct gggtcttcgg tgtccacttt tgcaagctca tctttgccat ctacaagatg agcttcttca gtggcatgct cctacttctt tgcatcagca ttgaccgcta cgtggccatc gtccaggctg tctcagctca ccgccaccgt gcccgcgtcc ttctcatcag caagctgtcc tgtgtgggca tctggatact agccacagtg ctctccatcc cagagctcct gtacagtgac ctccagagga gcagcagtga gcaagcgatg cgatgctctc tcatcacaga gcatgtggag gcctttatca ccatccaggt ggcccagatg gtgatcggct ttctggtccc cctgctggcc atgagcttct gttaccttgt catcatccgc accctgctcc aggcacgcaa ctttgagcgc aacaaggcca tcaaggtgat catcgctgtg gtcgtggtct tcatagtctt ccagctgccc tacaatgggg tggtcctggc ccagacggtg gccaacttca acatcaccag tagcacctgt gagctcagta agcaactcaa catcgcctac gacgtcacct acagcctggc ctgcgtccgc tgctgcgtca acccctttctt gtacgccttc atcggcgtca agttccgcaa cgatctcttc aagctcttca aggacctggg ctgcctcagc caggagcagc tccggcagtg gtcttcctgt cggcacatcc ggcgctcctc catgagtgtg gaggccgaga ccaccaccac cttctcccca taggcgactc ttctgcctgg actagaggga cctctcccag ggtccctggg gtggggatag ggagcagatg caatgactca ggacatcccc ccgccaaaag ctgctcaggg aaaagcagct ctcccctcag agtgcaagcc ctgctccaga agttagcttc accccaatcc cagctacctc aaccaatgcc gaaaaagaca gggctgataa gctaacacca gacagacaac actgggaaac agaggctatt gtcccctaaa ccaaaaactg aaagtgaaag tccagaaact gttcccacct gctggagtga aggggccaag gagggtgagt gcaaggggcg tgggagtggc ctgaagagtc ctctgaatga accttctggc ctcccacaga ctcaaatgct cagaccagct cttccgaaaa ccaggcctta tctccaagac cagagatagt ggggagactt cttggcttgg tgaggaaaag cggacatcag ctggtcaaac aaactctctg aacccctccc tccatcgttt tcttcactgt cctccaagcc agcgggaatg gcagctgcca cgccgcccta aaagcacact catcccctca cttgccgcgt cgccctccca ggctctcaac aggggagagt gtggtgtttc ctgcaggcca	A	Homo sapiens

				ggccagctgc ctccgcgtga tcaaagccac actctgggct ccagagtggg gatgacatgc actcagctct tggctccact gggatgggag gagaggacaa gggaaatgtc aggggcgggg agggtgacag tggccgccca aggccacgag cttgttcttt gttctttgtc acagggactg aaaacctctc ctcatgttct gctttcgatt cgttaagaga gcaacatttt acccacacac agataaagtt ttcccttgag gaaacaacag ctttaaaag		
68	741	C-C Chemokine Receptor 7	NP_001829.1	MDLGKPMKSV LVVALLVIFQ VCLCQDEVTD DYIGDNTTVD YTLFESLCSK KDVRNFKAWF LPIMYSIICF VGLLGNGLVV LTYIYFKRLK TMTDTYLLNL AVADILFLLT LPFWAYSAAK SWVFGVHFCK LIFAIYKMSF FSGMLLLLCI SIDRYVAIVQ AVSAHRHRAR VLLISKLSCV GIWILATVLS IPELLYSDLQ RSSSEQAMRC SLITEHVEAF ITIQVAQMVI GFLVPLLAMS FCYLVIIRTL LQARNFERNK AIKVIIAVVV VFIVFQLPYN GVVLAQTVAN FNITSSTCEL SKQLNIAYDV TYSLACVRCC VNPFLYAFIG VKFRNDLFKL FKDLGCLSQE QLRQWSSCRH IRRSSMSVEA ETTTTFSP	P	Homo sapiens
69	742	C-C Chemokine Receptor 8	AI733823	TTTAAATTTA AAAACTTTAT TGGAATAGCA TGTTAGCAGC AGTGAACAGG GCATGGCACA GAAGGTTTCC AAAACAAGTT TAGCATGAAG GATGCCATAT GCTGTTGCCA ACAACTAGAA CACGGTGACT AAAGACACAG TTCTGAATGT CCAGCACAAC CTCTGGCCTG CAACTATGTT CAGTGATGAT GATAAACAAG GTGGTGACTT GGAAGGAATC CCTATGTCAA GTGAGAAAAA AAAATGATGT CTGACCTCCT TATATATGTA AAAAATATAC CTTCAGAGTC CGTCAGTAAG CTGGAAGAAG TGGATGTTGA AGTTTTTAAC ATCGATGATG GGTCTCCAGT TGTTCATCAA CCCATGGTGA AATAGCTGAA CGGTTCTGAA TCAAAGGTGA TCCTAATAGT GAAGACATTA ACATTGCAGA AAAAGTGCCT ACAGATTATA TGGTGAAAAT ACGTGATGGG CTTCTTGAAG GACTAGAGCA GTGTGTATTC AAAACAGAAC AAGAAATCAC GTCAGTTTAT	A	Homo sapiens
70	742	C-C Chemokine Receptor 8	LG6770	TGCCAAATAT GCTGTTGCCA ACACTTAGAA CACAATGACT GGAGACACAG TTGTGCGTGC CTGGCACAAC CTCCAGCCTG TGTCTATGTT CAGTGATGAT GATGAGCAAG GTGGTGACTT TGAAGGATTT TGTATATCAA GTGAAAAGAA ATGATATCTG ACCTCCTTAC ATATCTAAAA CATATACCTT CAAAATCCAT CAATAAGCTG AAAGAAATAG ATATCAAAGA ATATTTTAAC ATCATTAATG AGGCTCCAGT TATTCATTCA TTGACCAATG GTAATATAGC TGAAATGATT CTGAATCAAG CTGATTATGA TAATAGTGAT GATGAAGATG ATGTTAATAC TGCAGAAAAA GTGCCTATAA ATGACACAGT GAAAA	A	Homo sapiens
71	742	C-C Chemokine Receptor 8	NM_005201	ctccagagag gctgctgctc attgagctgc actcacatga ggatacagac tttgtgaaga aggaattggc aacactgaaa cctccagaac aaaggctgtc actaaggtcc cgctgccttg atggattata cacttgacct cagtgtgaca acagtgaccg actactacta ccctgatatc ttctcaagcc cctgtgatgc ggaacttatt cagacaaatg gcaagttgct ccttgctgtc ttttattgcc tcctgtttgt attcagtctt ctgggaaaca gcctggtcat cctggtcctt gtggtctgca agaagctgag gagcatcaca gatgtatacc tcttgaacct ggccctgtct gacctgcttt ttgtcttctc cttccccttt cagacctact atctgctgga ccagtgggtg tttgggactg taatgtgcaa agtggtgtct ggcttttatt acattggctt ctacagcagc atgtttttca tcaccctcat gagtgtggac aggtacctgg ctgttgtcca tgccgtgtat gccctaaagg tgaggacgat caggatgggc acaacgctgt gcctggcagt atggctaacc gccattatgg ctaccatccc attgctagtg ttttaccaag tggcctctga agatggtgtt ctacagtgtt attcatttta caatcaacag actttgaagt ggaagatctt caccaacttc aaaatgaaca ttttaggctt gttgatccca ttcaccatct ttatgttctg ctacattaaa	A	Homo sapiens

				atcctgcacc agctgaagag gtgtcaaaac cacaacaaga ccaaggccat caggttggtg ctcattgtgg tcattgcatc tttacttttc tgggtcccat tcaacgtggt tcttttcctc acttccttgc acagtatgca catcttggat ggatgtagca taagccaaca gctgacttat gccacccatg tcacagaaat catttccttt actcactgct gtgtgaaccc tgttatctat gcttttgttg gggagaagtt caagaaacac ctctcagaaa tatttcagaa aagttgcagc caaatcttca actacctagg aagacaaatg cctagggaga gctgtgaaaa gtcatcatcc tgccagcagc actcctcccg ttcctccagc gtagactaca ttttgtgagg atcaatgaag actaaatata aaaaacattt tcttgaatgg catgctagta gcagtgagca aaggtgtggg tgtgaaaggt ttccaaaaaa agttcagcat gaaggatgcc atatatgttg ttgccaacac ttaaaacaca atgactggag acatagttgt gcatgcctgg cacaacatca agcctgtgat tgtgtttatt gatgatgttg aacaagtggt aactttaaag gattctgtat gccaagtgaa aaaaaaagat gtctgacctc cttcatatgc aaaaatatac cttcagagac tgtcagtagg ctggaagaag tggatattga agttttgaca tcaatgatga ggctccagtt gtctatgcat tgactgatgg tgaaatggct ggagtgattc tgaatcaagg tgattgtgat tatagtgaca atgaagatga tgctattaat actgcataaa aagtgcctgt agatgacatg gtgaaaatat ttgacaggct tatggaagga ctacagcagc acgcattcat aacagaacaa gaaattatct cagcttataa aatcaaacag agacttctag acaaaaacca ttgttgatga ggcagatgcc tctagaagag acgtttaaaa gccatcaaac acaatgcctc atcttccctg gaggacccac ttcctgatcc ctcaactgtg tctgatgttt cttctcatgt aagaaataaa aaataaaaat aaaaaaatat atattggtat gtaactacag gaaaaaaata aaaaatatat agtggacagt aacctttcaa tcaaaactca gtatcataag tagagactga aaacttgccg ttattgattg ttgttattaa cagctgatac aggtattctg ctgatgctac tgctgcctag ttaccatgaa cacgtttttt cactattaat ggtgcgtcat atttttttact tttaagtact tacgtgtgag taagtgtaag aaaatgattg cttatcagta gtatcaatga tttactcaat atctgaatca ccttgattca gaaccatttc agctgtttca ccatcagtca atgaataaca gcctcattga tgtcaaaaac ttcaatatcc acttctttca gcctactgta gactctggaa gtatactttt tgcatatgta aggaagtcag attttttttt		
72	742	C-C Chemokine Receptor 8	NP_005192.1	MDYTLDLSVT TVTDYYYPDI FSSPCDAELI QTNGKLLLAV FYCLLFVFSL LGNSLVILVL VVCKKLRSIT DVYLLNLALS DLLFVFSFPF QTYYLLDQWV FGTVMCKVVS GFYYIGFYSS MFFITLMSVD RYLAVVHAVY ALKVRTIRMG TTLCLAVWLT AIMATIPLLV FYQVASEDGV LQCYSFYNQQ TLKWKIFTNF KMNILGLLIP FTIFMFCYIK ILHQLKRCQN HNKTKAIRLV LIVVIASLLF WVPFNVVLFL TSLHSMHILD GCSISQQLTY ATHVTEIISF THCCVNPVIY AFVGEKFKKH LSEIFQKSCS QIFNYLGRQM PRESCEKSSS CQQHSSRSSS VDYIL	P	Homo sapiens
73	752	CXC Chemokine Receptor 3	NM_001504	ccaaccacaa gcaccaaagc agaggggcag gcagcacacc acccagcagc cagagcacca gcccagccat ggtccttgag gtgagtgacc accaagtgct aaatgacgcc gaggttgccg ccctcctgga gaacttcagc tcttcctatg actatggaga aaacgagagt gactcgtgct gtacctcccc gccctgccca caggacttca gcctgaactt cgaccgggcc ttcctgccag ccctctacag cctcctcttt ctgctggggc tgctgggcaa cggcgcggtg gcagccgtgc tgctgagccg gcggacagcc ctgagcagca ccgacacctt cctgctccac ctagctgtag cagacacgct gctggtgctg acactgccgc tctgggcagt ggacgctgcc gtccagtggg tctttggctc tggcctctgc aaagtggcag gtgccctctt caacatcaac ttctacgcag	A	Homo sapiens

				gagccctcct gctggcctgc atcagctttg accgctacct gaacatagtt catgccaccc agctctaccg ccgggggccc ccggcccgcg tgaccctcac ctgcctggct gtctgggggc tctgcctgct tttcgccctc ccagacttca tcttcctgtc ggcccaccac gacgagcgcc tcaacgccac ccactgccaa tacaacttcc cacaggtggg ccgcacggct ctgcgggtgc tgcagctggt ggctggcttt ctgctgcccc tgctggtcat ggcctactgc tatgcccaca tcctggccgt gctgctggtt tccaggggcc agcggcgcct gcgggccatg cggctggtgg tggtggtcgt ggtggccttt gccctctgct ggacccccta tcacctggtg gtgctggtgg acatcctcat ggacctgggc gctttggccc gcaactgtgg ccgagaaagc agggtagacg tggccaagtc ggtcacctca ggcctgggct acatgcactg ctgcctcaac ccgctgctct atgcctttgt aggggtcaag ttccgggagc ggatgtggat gctgctcttg cgcctgggct gccccaacca gagagggctc cagaggcagc catcgtcttc ccgccgggat tcatcctggt ctgagacctc agaggcctcc tactcgggct tgtgaggccg gaatccgggc tcccctttcg cccacagtct gacttccccg cattccaggc tcctccctcc ctctgccggc tctggctctc cccaatatcc tcgctcccgg gactcactgg cagccccagc accaccaggt ctcccgggaa gccaccctcc cagctctgag gactgcacca ttgctgctcc ttagctgcca agccccatcc tgccgcccga ggtggctgcc tggagcccca ctgcccttct catttggaaa ctaaaacttc atcttcccca agtgcgggga gtacaaggca tggcgtagag ggtgctgccc catgaagcca cagcccaggc ctccagctca gcagtgactg tggccatggt ccccaagacc tctatatttg ctcttttatt tttatgtcta aaatcctgct taaaactttt caataaacaa gatcgtcagg accaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa		
74	752	CXC Chemokine Receptor 3	NP_001495.1	MVLEVSDHQV LNDAEVAALL ENFSSSYDYG ENESDSCCTS PPCPQDFSLN FDRAFLPALY SLLFLLGLLG NGAVAAVLLS RRTALSSTDT FLLHLAVADT LLVLTLPLWA VDAAVQWVFG SGLCKVAGAL FNINFYAGAL LLACISFDRY LNIVHATQLY RRGPPARVTL TCLAVWGLCL LFALPDFIFL SAHHDERLNA THCQYNFPQV GRTALRVLQL VAGFLLPLLV MAYCYAHILA VLLVSRGQRR LRAMRLVVVV VVAFALCWTP YHLVVLVDIL MDLGALARNC GRESRVDVAK SVTSGLGYMH CCLNPLLYAF VGVKFRERMW MLLLRLGCPN QRGLQRQPSS SRRDSSWSET SEASYSGL	P	Homo sapiens
75	753	CXC Chemokine Receptor 4	NM_003467	gtttgttggc tgcggcagca ggtagcaaag tgacgccgag ggcctgagtg ctccagtagc caccgcatct ggagaaccag cggttaccat ggaggggatc agtatataca cttcagataa ctacaccgag gaaatgggct caggggacta tgactccatg aaggaaccct gtttccgtga agaaaatgct aatttcaata aaatcttcct gcccaccatc tactccatca tcttcttaac tggcattgtg ggcaatggat tggtcatcct ggtcatgggt taccagaaga aactgagaag catgacggac aagtacaggc tgcacctgtc agtggccgac ctcctctttg tcatcacgct tcccttctgg gcagttgatg ccgtggcaaa ctggtacttt gggaacttcc tatgcaaggc agtccatgtc atctacacag tcaacctcta cagcagtgtc ctcatcctgg ccttcatcag tctggaccgc tacctggcca tcgtccacgc caccaacagt cagaggccaa ggaagctgtt ggctgaaaag gtggtctatg ttggcgtctg gatccctgcc ctcctgctga ctattcccga cttcatcttt gccaacgtca gtgaggcaga tgacagatat atctgtgacc gcttctaccc caatgacttg tgggtggttg tgttccagtt tcagcacatc atggttggcc ttatcctgcc tggtattgtc atcctgtcct gctattgcat tatcatctcc aagctgtcac actccaaggg ccaccagaag cgcaaggccc tcaagaccac agtcatcctc atcctggctt tcttcgcctg	A	Homo sapiens

				ttggctgcct tactacattg ggatcagcat cgactccttc atcctcctgg aaatcatcaa		
				gcaagggtgt gagtttgaga acactgtgca caagtggatt tccatcaccg aggccctagc		
				tttcttccac tgttgtctga accccatcct ctatgctttc cttggagcca aatttaaaac		
				ctctgcccag cacgcactca cctctgtgag cagagggtcc agcctcaaga tcctctccaa		
				aggaaagcga ggtggacatt catctgtttc cactgagtct gagtcttcaa gttttcactc		
				cagctaacac agatgtaaaa gacttttttt tatacgataa ataacttttt tttaagttac		
				acatttttca gatataaaag actgaccaat attgtacagt ttttattgct tgttggattt		
				ttgtcttgtg tttctttagt ttttgtgaag tttaattgac ttatttatat aaattttttt		
				tgtttcatat tgatgtgtgt ctaggcagga cctgtggcca agttcttagt tgctgtatgt		
				ctcgtggtag gactgtagaa aagggaactg aacattccag agcgtgtagt gaatcacgta		
				aagctagaaa tgatccccag ctgtttatgc atagataatc tctccattcc cgtggaacgt		
				ttttcctgtt cttaagacgt gattttgctg tagaagatgg cacttataac caaagcccaa		
				agtggtatag aaatgctggt tttcagtttt tcaggagtgg gttgatttca gcacctacag		
				tgtacagtct tgtattaagt tgttaataaa agtacatgtt aaacttactt agtgttatg		
76	753	CXC Chemokine Receptor 4	NP_003458.1	MEGISIYTSD NYTEEMGSGD YDSMKEPCFR EENANFNKIF LPTIYSIIFL TGIVGNGLVI	P	Homo sapiens
				LVMGYQKKLR SMTDKYRLHL SVADLLFVIT LPFWAVDAVA NWYFGNFLCK AVHVIYTVNL		
				YSSVLILAFI SLDRYLAIVH ATNSQRPRKL LAEKVVYVGV WIPALLLTIP DFIFANVSEA		
				DDRYICDRFY PNDLWVVVFQ FQHIMVGLIL PGIVILSCYC IIISKLSHSK GHQKRKALKT		
				TVILILAFFA CWLPYYIGIS IDSFILLEII KQGCEFENTV HKWISITEAL AFFHCCLNPI		
				LYAFLGAKFK TSAQHALTSV SRGSSLKILS KGKRGGHSSV STESESSSFH SS		
77	755	Complement Component 3a Receptor 1	NM_004054	atggcgtctt tctctgctga gaccaattca actgacctac tctcacagcc atggaatgag	A	Homo sapiens
				cccccagtaa ttctctccat ggtcattctc agccttactt ttttactggg attgccaggc		
				aatgggctgg tgctgtgggt ggctggcctg aagatgcagc ggacagtgaa cacaatttgg		
				ttcctccacc tcaccttggc ggacctcctc tgctgcctct ccttgccctt ctcgctggct		
				cacttggctc tccagggaca gtggccctac ggcaggttcc tatgcaagct catcccctcc		
				atcattgtcc tcaacatgtt tgccagtgtc ttcctgctta ctgccattag cctggatcgc		
				tgtcttgtgg tattcaagcc aatctggtgt cagaatcatc gcaatgtagg gatggcctgc		
				tctatctgtg gatgtatctg ggtggtggct tttgtgatgt gcattcctgt gttcgtgtac		
				cgggaaatct tcactacaga caaccataat agatgtggct acaaatttgg tctctccagc		
				tcattagatt atccagactt ttatggagat ccactagaaa acaggtctct tgaaaacatt		
				gttcagccgc ctggagaaat gaatgatagg ttagatcctt cctctttcca aacaaatgat		
				catccttgga cagtccccac tgtcttccaa cctcaaacat ttcaaagacc ttctgcagat		
				tcactcccta ggggttctgc taggttaaca agtcaaaatc tgtattctaa tgtatttaaa		
				cctgctgatg tggtctcacc taaaatcccc agtgggtttc ctattgaaga tcacgaaacc		
				agcccactgg ataactctga tgcttttctc tctactcatt taaagctgtt ccctagcgct		
				tctagcaatt ccttctacga gtctgagcta ccacaaggtt tccaggatta ttacaattta		
				ggccaattca cagatgacga tcaagtgcca acacccctcg tggcaataac gatcactagg		
				ctagtggtgg gtttcctgct gccctctgtt atcatgatag cctgttacag cttcattgtc		
				ttccgaatgc aaaggggccg cttcgccaag tctcagagca aaacctttcg agtggccgtg		
				gtggtggtgg ctgtctttct tgtctgctgg actccatacc acatttttgg agtcctgtca		
				ttgcttactg acccagaaac tcccttgggg aaaactctga tgtcctggga tcatgtatgc		

				attgctctag catctgccaa tagttgcttt aatcccttcc tttatgccct cttggggaaa gattttagga agaaagcaag gcagtccatt cagggaattc tggaggcagc cttcagtgag gagctcacac gttccaccca ctgtccctca aacaatgtca tttcagaaag aaatagtaca actgtgtga		
78	755	Complement Component 3a Receptor 1	NP_004045.1	MASFSAETNS TDLLSQPWNE PPVILSMVIL SLTFLLGLPG NGLVLWVAGL KMQRTVNTIW FLHLTLADLL CCLSLPFSLA HLALQGQWPY GRFLCKLIPS IIVLNMFASV FLLTAISLDR CLVVFKPIWC QNHRNVGMAC SICGCIWVVA FVMCIPVFVY REIFTTDNHN RCGYKFGLSS SLDYPDFYGD PLENRSLENI VQPPGEMNDR LDPSSFQTND HPWTVPTVFQ PQTFQRPSAD SLPRGSARLT SQNLYSNVFK PADVVSPKIP SGFPIEDHET SPLDNSDAFL STHLKLFPSA SSNSFYESEL PQGFQDYYNL GQFTDDDQVP TPLVAITITR LVVGFLLPSV IMIACYSFIV FRMQRGRFAK SQSKTFRVAV VVVAVFLVCW TPYHIFGVLS LLTDPETPLG KTLMSWDHVC IALASANSCF NPFLYALLGK DFRKKARQSI QGILEAAFSE ELTRSTHCPS NNVISERNST TV	P	Homo sapiens
79	758	Complement Component 5a Receptor 1	NM_001736	agggggagcc caggagacca gaacatgaac tccttcaatt ataccacccc tgattatggg cactatgatg acaaggatac cctggacctc aacacccctg tggataaaac ttctaacacg ctgcgtgttc cagacatcct ggccttggtc atctttgcag tcgtcttcct ggtgggagtg ctgggcaatg ccctggtggt ctgggtgacg gcattcgagg ccaagcggac catcaatgcc atctggttcc tcaacttggc ggtagccgac ttcctctcct gcctggcgct gcccatcttg ttcacgtcca ttgtacagca tcaccactgg ccctttggcg ggccgcctg cagcatcctg ccctccctca tcctgctcaa catgtacgcc agcatcctgc tcctggccac catcagcgcc gaccgctttc tgctggtgtt taaacccatc tggtgccaga acttccgagg ggccggcttg gcctggatcg cctgtgccgt ggcttggggt ttagccctgc tgctgaccat accctccttc ctgtaccggg tggtccggga ggagtacttt ccaccaaagg tgttgtgtgg cgtggactac agccacgaca aacggcggga gcgagccgtg gccatcgtcc ggctggtcct gggcttcctg tggcctctac tcacgctcac gatttgttac actttcatcc tgctccggac gtggagccgc agggccacgc ggtccaccaa gacactcaag gtggtggtgg cagtggtggc cagtttcttt atcttctggt tgccctacca ggtgacgggg ataatgatgt ccttcctgga gccatcgtca cccaccttcc tgctgctgaa taagctggac tccctgtgtg tctcctttgc ctacatcaac tgctgcatca accccatcat ctacgtggtg gccggccagg gcttccaggg ccgactgcgg aaatccctcc ccagcctcct ccggaacgtg ttgactgaag agtccgtggt tagggagagc aagtcattca cgcgctccac agtggacact atggcccaga agacccaggc agtgtaggcg acagcctcat gggccactgt ggcccgatgt ccccttcctt cccggccatt ctccctcttg ttttcacttc acttttcgtg ggatggtgtt accttagcta actaactctc ctccatgttg cctgtctttc ccagacttgt ccctcctttt ccagcgggac tcttctcatc cttcctcatt tgcaaggtga acacttcctt ctagggagca ccctcccacc ccccaccccc ccccacacac catctttcca tcccaggctt ttgaaaaaca aacagaaacc cgtgtatctg ggatatttcc atatggcaat aggtgtgaac agggaactca gaatacagac aagtagaaag attctcgctt aaaaaaatgt atttatttta tggcaagttg gaaaatatgt aactggaatc tcaaaagttc tttgggacaa aacagaagtc catggagtta tctaagctct tgtaagtgag ttaatttaaa aaagaaaatt aggctgagag cagtggctca cgcctgtaat cccagaactt tgggaggcta aggtgggtgg atcacctgag gtcaagagtt ccagaccagg ctggccagca tggtgaaacc	A	Homo sapiens

				ccgtctgtac taaaaataca aaaaattaac tgggcatggt agtgggtgcc tgtaatccca gctacttggg aggctgaggt gggagaattg ctcgaacctt ggaggtggag gttgtggtga gccatgatcg caccactgca ctctagcctg ggtgaccgag ggaggctctg tctcaaaagc aaagcaaaaa caaaaacaaa aacacctaaa aaacctgcag ttttgtttgt actttgtttt taaattatgc tttctatttt gagatcattg caaactcaac acaattgtaa gtaatgatac agagggatct tgtgtaccct tcacccagcc tcccccaatg gcaacatctt gcaaaactac aatgtagtct cataaccagg atattgacat tgatacagtg aagatacagg acattctcat caccacaggg atccccagga tgcccacttc cctccacccc cacaccccag ccgtgtccct aacccctggc aaccaggaat ccactctcca tttctataat gttgtcattt caagaatgtt attcaatgga atcatatagt atgtaacctg ttttgagctt aaaaaaaaaa gtatacatga ctttaatgag gaaaataaaa atgaatattg aaaaaaaaaa ctttagag		
80	758	Complement Component 5a Receptor 1	NP_001727.1	MNSFNYTTPD YGHYDDKDTL DLNTPVDKTS NTLRVPDILA LVIFAVVFLV GVLGNALVVW VTAFEAKRTI NAIWFLNLAV ADFLSCLALP ILFTSIVQHH HWPFGGAACS ILPSLILLNM YASILLLATI SADRFLLVFK PIWCQNFRGA GLAWIACAVA WGLALLLTIP SFLYRVVREE YFPPKVLCGV DYSHDKRRER AVAIVRLVLG FLWPLLTLTI CYTFILLRTW SRRATRSTKT LKVVVAVVAS FFIFWLPYQV TGIMMSFLEP SSPTFLLLNK LDSLCVSFAY INCCINPIIY VVAGQGFQGR LRKSLPSLLR NVLTEESVVR ESKSFTRSTV DTMAQKTQAV	P	Homo sapiens
81	767	Calcitonin Receptor-like Receptor	NM_005795	gcacgaggga acaacctctc tctctscagc agagagtgtc acctcctgct ttaggaccat caagctctgc taactgaatc tcatcctaat tgcaggatca cattgcaaag ctttcactct ttcccacctt gcttgtgggt aaatctcttc tgcggaatct cagaaagtaa agttccatcc tgagaatatt tcacaaagaa tttccttaag agctggactg ggtcttgacc cctggaattt aagaaattct taaagacaat gtcaaatatg atccaagaga aaatgtgatt tgagtctgga gacaattgtg catatcgtct aataataaaa acccatacta gcctatagaa aacaatattt gaataataaa aacccatact agcctataga aaacaatatt tgaaagattg ctaccactaa aaagaaaact actacaactt gacaagactg ctgcaaactt caattggtca ccacaacttg acaaggttgc tataaaacaa gattgctaca acttctagtt tatgttatac agcatatttc atttgggctt aatgatggag aaaaagtgta ccctgtattt tctggttctc ttgccttttt ttatgattct tgttacagca gaattagaag agagtcctga ggactcaatt cagttgggag ttactagaaa taaaatcatg acagctcaat atgaatgtta ccaaaagatt atgcaagacc ccattcaaca agcagaaggc gtttactgca acagaacctg ggatggatgg ctctgctgga acgatgttgc agcaggaact gaatcaatgc agctctgccc tgattacttt caggactttg atccatcaga aaaagttaca aagatctgtg accaagatgg aaactggttt agacatccag caagcaacag aacatggaca aattataccc agtgtaatgt taacacccac gagaaagtga agactgcact aaatttgttt tacctgacca taattggaca cggattgtct attgcatcac tgcttatctc gcttggcata ttcttttatt tcaagagcct aagttgccaa aggattacct tacacaaaaa tctgttcttc tcatttgttt gtaactctgt tgtaacaatc attcacctca ctgcagtggc caacaaccag gccttagtag ccacaaatcc tgttagttgc aaagtgtccc agttcattca tctttacctg atgggctgta attacttttg gatgctctgt gaaggcattt acctacacac actcattgtg gtggccgtgt ttgcagagaa gcaacattta atgtggtatt attttcttgg ctggggattt ccactgattc ctgcttgtat acatgccatt gctagaagct tatattacaa tgacaattgc tggatcagtt ctgataccca tctcctctac attatccatg	A	Homo sapiens

				gcccaatttg tgctgcttta ctggtgaatc tttttttctt gttaaatatt gtacgcgttc tcatcaccaa gttaaaagtt acacaccaag cggaatccaa tctgtacatg aaagctgtga gagctactct tatcttggtg ccattgcttg gcattgaatt tgtgctgatt ccatggcgac ctgaaggaaa gattgcagag gaggtatatg actacatcat gcacatcctt atgcacttcc agggtctttt ggtctctacc attttctgct tctttaatgg agaggttcaa gcaattctga gaagaaactg gaatcaatac aaaatccaat ttggaaacag cttttccaac tcagaagctc ttcgtagtgc gtcttacaca gtgtcaacaa tcagtgatgg tccaggttat agtcatgact gtcctagtga acacttaaat ggaaaaagca tccatgatat tgaaaatgtt ctcttaaaac cagaaaattt atataattga aaatagaagg atggttgtct cactgtttgg tgcttctcct aactcaagga cttggaccca tgactctgta gccagaagac ttcaatatta aatgactttg gggaatgtca taaagaagag ccttcacatg aaattagtag tgtgttgata agagtgtaac atccagctct atgtgggaaa aaagaaatcc tggtttgtaa tgtttgtcag taaatactcc cactatgcct gatgtgacgc tactaacctg acatcaccaa gtgtggaatt ggagaaaagc acaatcaact tttctgagct ggtgtaagcc agttccagca caccattgat gaattcaaac aaatggctgt aaaactaaac atacatgttg ggcatgattc tacccttatt csccccaaga gacctagcta aggtctataa acatgaaggg aaaattagct tttagtttta aaactcttta tcccatcttg attggggcag ttgacttttt ttttttccca gagtgccgta gtccttttttg taactaccct ctcaaatgga caataccaga agtgaattat ccctgctggc tttcttttct ctatgaaaag caactgagta caattgttat gatctactca tttgctgaca catcagttat atcttgtggc atatccattg tggaaactgg atgaacagga tgtataatat gcaatcttac ttctatatca ttaggaaaac atcttagttg atgctacaaa acaccttgtc aacctcttcc tgtcttacca aacagtggga gggaattcct agctgtaaat ataaattttg cccttccatt tctactgtat aaacaaatta gcaatcattt tatataaaga aaatcaatga aggatttctt attttcttgg aattttgtaa aaagaaattg tgaaaaatga gcttgtaaat actccattat tttattttat agtctcaaat caaatacata caacctatgt aatttttaaa gcaaatatat aatgcaacaa tgtgtgtatg ttaatatctg atactgtatc tgggctgatt ttttaaataa aatagagtct ggaatgct		
82	767	Calcitonin Receptor-like Receptor	NP_005786.1	MEKKCTLYFL VLLPFFMILV TAELEESPED SIQLGVTRNK IMTAQYECYQ KIMQDPIQQA EGVYCNRTWD GWLCWNDVAA GTESMQLCPD YFQDFDPSEK VTKICDQDGN WFRHPASNRT WTNYTQCNVN THEKVKTALN LFYLTIIGHG LSIASLLISL GIFFYFKSLS CQRITLHKNL FFSFVCNSVV TIIHLTAVAN NQALVATNPV SCKVSQFIHL YLMGCNYFWM LCEGIYLHTL IVVAVFAEKQ HLMWYYFLGW GFPLIPACIH AIARSLYYND NCWISSDTHL LYIIHGPICA ALLVNLFFLL NIVRVLITKL KVTHQAESNL YMKAVRATLI LVPLLGIEFV LIPWRPEGKI AEEVYDYIMH ILMHFQGLLV STIFCFFNGE VQAILRRNWN QYKIQFGNSF SNSEALRSAS YTVSTISDGP GYSHDCPSEH LNGKSIHDIE NVLLKPENLY N	P	Homo sapiens
83	832	Cannabinoid Receptor 1	NM_001840	ggggactacg gagagctctg cagggagccg aggcccccgc ccgggccaag ggagcttctg tcccgaggac caggggatgc gaagggattg cccccctgtgg gtcactttct cagtcatttt gagctcagcc taatcaaaga ctgaggttat gaagtcgatc ctagatggcc ttgcagatac caccttccgc accatcacca ctgacctcct gtacgtgggc tcaaatgaca ttcagtacga agacatcaaa ggtgacatgg catccaaatt agggtacttc ccacagaaat tccctttaac ttcctttagg ggaagtccct tccaagagaa gatgactgcg ggagacaacc cccagctagt	A	Homo sapiens

				cccagcagac caggtgaaca ttacagaatt ttacaacaag tctctctcgt ccttcaagga gaatgaggag aacatccagt gtggggagaa cttcatggac atagagtgtt tcatggtcct gaaccccagc cagcagctgg ccattgcagt cctgtccctc acgctgggca ccttcacggt cctggagaac ctcctggtgc tgtgcgtcat cctccactcc cgcagcctcc gctgcaggcc ttcctaccac ttcatcggca gcctggcggt ggcagacctc ctggggagtg tcatttttgt ctacagcttc attgacttcc acgtgttcca ccgcaaagat agccgcaacg tgtttctgtt caaactgggt ggggtcacgg cctccttcac tgcctccgtg ggcagcctgt tcctcacagc catcgacagg tacatatcca ttcacaggcc cctggcctat aagaggattg tcaccaggcc caaggccgtg gtggcgtttt gcctgatgtg gaccatagcc attgtgatcg ccgtgctgcc tctcctgggc tggaactgcg agaaactgca atctgtttgc tcagacattt tcccacacat tgatgaaacc tacctgatgt tctggatcgg ggtcaccagc gtactgcttc tgttcatcgt gtatgcgtac atgtatattc tctggaaggc tcacagccac gccgtccgca tgattcagcg tggcacccag aagagcatca tcatccacac gtctgaggat gggaaggtac aggtgacccg gccagaccaa gcccgcatgg acattaggtt agccaagacc ctggtcctga tcctggtggt gttgatcatc tgctggggcc ctctgcttgc aatcatggtg tatgatgtct ttgggaagat gaacaagctc attaagacgg tgtttgcatt ctgcagtatg ctctgcctgc tgaactccac cgtgaacccc atcatctatg ctctgaggag taaggacctg cgacacgctt tccggagcat gtttccctct tgtgaaggca ctgcgcagcc tctggataac agcatggggg actcggactg cctgcacaaa cacgcaaaca atgcagccag tgttcacagg gccgcagaaa gctgcatcaa gagcacggtc aagattgcca aggtaaccat gtctgtgtcc acagacacgt ctgccgaggc tctgtgagcc tgatgcctcc ctggcagcac aggaaaagaa tttttttttt taagctcaaa atctagaaga gtctattgtc tccttggtta tatttttttta actttaccat gctcaatgaa aaggtgattg ccacatgtca cttatttgct tagtttccgt ttgggctaat cttccggggt tcgtaggaaa ccttt		
84	832	Cannabinoid Receptor 1	NP_001831.1	MKSILDGLAD TTFRTITTDL LYVGSNDIQY EDIKGDMASK LGYFPQKFPL TSFRGSPFQE KMTAGDNPQL VPADQVNITE FYNKSLSSFK ENEENIQCGE NFMDIECFMV LNPSQQLAIA VLSLTLGTFT VLENLLVLCV ILHSRSLRCR PSYHFIGSLA VADLLGSVIF VYSFIDFHVF HRKDSRNVFL FKLGGVTASF TASVGSLFLT AIDRYISIHR PLAYKRIVTR PKAVVAFCLM WTIAIVIAVL PLLGWNCEKL QSVCSDIFPH IDETYLMFWI GVTSVLLLFI VYAYMYILWK AHSHAVRMIQ RGTQKSIIIH TSEDGKVQVT RPDQARMDIR LAKTLVLILV VLIICWGPLL AIMVYDVFGK MNKLIKTVFA FCSMLCLLNS TVNPIIYALR SKDLRHAFRS MFPSCEGTAQ PLDNSMGDSD CLHKHANNAA SVHRAAESCI KSTVKIAKVT MSVSTDTSAE AL	P	Homo sapiens
85	833	Cannabinoid Receptor 2	NM_001841	caggtcctgg gagaggacag aaaacaactg gactcctcag cccccggcag ctcccagtgc ccagccaccc acaacacaac ccaaagcctt ctagacaagc tcagtggaat ctgaagggcc caccccatgg aggaatgctg ggtgacagag atagccaatg gctccaagga tggcttggat tccaacccta tgaaggatta catgatcctg agtggtcccc agaagacagc tgttgctgtg ttgtgcactc ttctgggcct gctaagtgcc ctggagaacg tggctgtgct ctatctgatc ctgtcctccc accaactccg ccggaagccc tcatacctgt tcattggcag cttggctggg gctgacttcc tggccagtgt ggtctttgca tgcagctttg tgaatttcca tgttttccat ggtgtggatt ccaaggctgt cttcctgctg aagattggca gcgtgactat gaccttcaca gcctctgtgg gtagcctcct gctgaccgcc attgaccgat acctctgcct gcgctatcca	A	Homo sapiens

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				gacttgcctc tttcagagat aaatgacaag ccttca		
86	833	Cannabinoid Receptor 2	NP_001832.1	MEECWVTEIA NGSKDGLDSN PMKDYMILSG PQKTAVAVLC TLLGLLSALE NVAVLYLILS	P	Homo sapi ns
				SHQLRRKPSY LFIGSLAGAD FLASVVFACS FVNFHVFHGV DSKAVFLLKI GSVTMTFTAS		
				VGSLLLTAID RYLCLRYPPS YKALLTRGRA LVTLGIMWVL SALVSYLPLM GWTCCPRPCS		
				ELFPLIPNDY LLSWLLFIAF LFSGIIYTYG HVLWKAHQHV ASLSGHQDRQ VPGMARMRLD		
				VRLAKTLGLV LAVLLICWFP VLALMAHSLA TTLSDQVKKA FAFCSMLCLI NSMVNPVIYA		
				LRSGEIRSSA HHCLAHWKKC VRGLGSEAKE EAPRSSVTET EADGKITPWP DSRDLDLSDC		
87	922	Leukocyte Antigen CD97	NM_001784	agcctgtgga gacgggacag ccctgtccca ctcactcttt cccctgccgc tcctgccggc	A	Homo sapiens
				agctccaacc atgggaggcc gcgtctttct cgcattctgt gtctggctga ctctgccggg		
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attaaacaca tgcatacaga aaaaaaaaaa aaaaaaaaaa a

88	922	Leukocyte Antigen CD97	NP_001775.1	MGGRVFLAFC VWLTLPGAET QDSRGCARWC PQNSSCVNAT ACRCNPGFSS FSEIITTPTE TCDDINECAT PSKVSCGKFS DCWNTEGSYD CVCSPGYEPV SGAKTFKNES ENTCQDVDEC SSGQHQCDSS TVCFNTVGSY SCRCRPGWKP RHGIPNNQKD TVCEDMTFST WTPPPGVHSQ TLSRFFDKVQ DLGRDSKTSS AEVTIQNVIK LVDELMEAPG DVEALAPPVR HLIATQLLSN LEDIMRILAK SLPKGPFTYI SPSNTELTLM IQERGDKNVT MGQSSARMKL NWAVAAGAED PGPAVAGILS IQNMTTLLAN ASLNLHSKKQ AELEEIYESS IRGVQLRRLS AVNSIFLSHN	P	Homo sapiens

				NTKELNSPIL FAFSHLESSD GEAGRDPPAK DVMPGPRQEL LCAFWKSDSD RGGHWATEVC QVLGSKNGST TCQCSHLSSF TILMAHYDVE DWKLTLITRV GLALSLFCLL LCILTFLLVR PIQGSRTTIH LHLCICLFVG STIFLAGIEN EGGQVGLRCR LVAGLLHYCF LAAFCWMSLE GLELYFLVVR VFQGQGLSTR WLCLIGYGVP LLIVGVSAAI YSKGYGRPRY CWLDFEQGFL WSFLGPVTFI ILCNAVIFVT TVWKLTQKFS EINPDMKKLK KARALTITAI AQLFLLGCTW VFGLFIFDDR SLVLTYVFTI LNCLQGAFLY LLHCLLNKKV REEYRKWACL VAGGSKYSEF TSTTSGTGHN QTRALRASES GI		
89	941	EMR1 Hormone Receptor	NM_001974	ctaaagtttt tttctttgaa tgacagaact acagcataat gcgtggcttc aacctgctcc tcttctgggg atgttgtgtt atgcacagct gggaagggca cataagaccc acacggaaac caaacacaaa gggtaataac tgtagagaca gtaccttgtg cccagcttat gccacctgca ccaatacggt ggacagttac tattgcactt gcaaacaagg cttcctgtcc agcaatgggc aaaatcactt caaggatcca ggagtgcgat gcaaagatat tgatgaatgt tctcaaagcc cccagccctg tggtcctaac tcatcctgca aaaacctgtc agggaggtac aagtgcagct gtttagatgg tttctcttct cccactggaa atgactgggt cccaggaaag ccgggcaatt tctcctgtac tgatatcaat gagtgcctca ccagcagggt ctgccctgag cattctgact gtgtcaactc catgggaagc tacagttgca gctgtcaagt tggattcatc tctagaaact ccacctgtga agacgtgaat gaatgtgcag atccaagagc ttgcccagag catgcaactt gtaataacac tgttggaaac tactcttgtt tctgcaaccc aggatttgaa tccagcagtg gccacttgag ttgccagggt ctcaaagcat cgtgtgaaga tattgatgaa tgcactgaaa tgtgccccat caattcaaca tgcaccaaca ctcctgggag ctacttttgc acctgccacc ctggctttgc accaagcagt ggacagttga atttcacaga ccaaggagtg gaatgtagag atattgatga gtgccgccaa gatccatcaa cctgtggtcc taattctatc tgcaccaatg ccctgggctc ctacagctgt ggctgcattg taggctttca tcccaatcca gaaggctccc agaaagatgg caacttcagc tgccaaaggg ttctcttcaa atgtaaggaa gatgtgatac ccgataataa gcagatccag caatgccaag agggaaccgc agtgaaacct gcatatgtct ccttttgtgc acaaataaat aacatcttca gcgttctgga caaagtgtgt gaaaataaaa cgaccgtagt ttctctgaag aatacaactg agagctttgt ccctgtgctt aaacaaatat ccatgtggac taaattcacc aaggaagaga cgtcctccct ggccacagtc ttcctggaga gtgtggaaag catgacactg gcatcttttt ggaaaccctc agcaaatgtc actccggctg ttcgggcgga atacttagac attgagagca aagttatcaa caaagaatgc agtgaagaga atgtgacgtt ggacttggta gccaaggggg ataagatgaa gatcgggtgt tccacaattg aggaatctga atccacagag accactggtg tggcttttgt ctcctttgtg ggcatggaat cggttttaaa tgagcgcttc ttccaagacc accaggctcc cttgaccacc tctgagatca agctgaagat gaattctcga gtcgttgggg gcataatgac tggagagaag aaagacggct tctcagatcc aatcatctac actctggaga acgttcagcc aaagcagaag tttgagaggc ccatctgtgt ttcctggagc actgatgtga agggtggaag atggacatcc tttggctgtg tgatcctgga agcttctgag acatatacca tctgcagctg taatcagatg gcaaatcttg ccgttatcat ggcgtctggg gagctcacga tggacttttc cttgtacatc attagccatg taggcattat catctccttg gtgtgcctcg tcttggccat cgccaccttt ctgctgtgtc gctccatccg aaatcacaac acctacctcc acctgcacct ctgcgtgtgt ctcctcttgg cgaagactct cttcctcgcc ggtatacaca agactgacaa caagacgggc tgcgccatca	A	Homo sapiens

				tcgcgggctt cctgcactac cttttccttg cctgcttctt ctggatgctg gtggaggctg tgatactgtt cttgatggtc agaaacctga aggtggtgaa ttacttcagc tctcgcaaca tcaagatgct gcacatctgt gcctttggtt atgggctgcc gatgctggtg gtggtgatct ctgccagtgt gcagccacag ggctatggaa tgcataatcg ctgctggctg aatacagaga cagggttcat ctggagtttc ttggggccag tttgcacagt tatagtgatc aactcccttc tcctgacctg gaccttgtgg atcctgaggc agaggctttc cagtgttaat gccgaagtct caacgctaaa agacaccagg ttactgacct tcaaggcctt tgcccagctc ttcatcctgg gctgctcctg ggtgctgggc atttttcaga ttggacctgt ggcaggtgtc atggcttacc tgttcaccat catcaacagc ctgcaggggg ccttcatctt cctcatccac tgtctgctca acggccaggt acgagaagaa tacaagaggt ggatcactgg gaagacgaag cccagctccc agtcccagac ctcaaggatc ttgctgtcct ccatgccatc cgcttccaag acgggttaaa gcctttcttg ctttcaaata tgctatggag ccacagttga ggacagtagt ttcctgcagg agcctaccct gaaatctctt ctcagcttaa catggaaatg aggatcccac cagccccaga accctctggg gaagaatgtt gggggccgtc ttcctgtggt tgtatgcact gatgagaaat cagacgtttc tgctccaaac gaccatttta tcttcgtgct ctgcaacttc ttcaattcca gagtttctga gaacagaccc aaattcaatg gcatgaccaa gaacacctgg ctaccatttt gtttctcct gcccttgttg gtgcatggtt ctaagcgtgc ccctccagcg cctatcatac gcctgacaca gagaacctct caataaatga tttgtcgcct gtctgactga tttaccctaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa		
90	941	EMR1 Hormone Receptor	NP_001965.1	MRGFNLLLFW GCCVMHSWEG HIRPTRKPNT KGNNCRDSTL CPAYATCTNT VDSYYCTCKQ GFLSSNGQNH FKDPGVRCKD IDECSQSPQP CGPNSSCKNL SGRYKCSCLD GFSSPTGNDW VPGKPGNFSC TDINECLTSR VCPEHSDCVN SMGSYSCSCQ VGFISRNSTC EDVNECADPR ACPEHATCNN TVGNYSCFCN PGFESSSGHL SCQGLKASCE DIDECTEMCP INSTCTNTPG SYFCTCHPGF APSSGQLNFT DQGVECRDID ECRQDPSTCG PNSICTNALG SYSCGCIVGF HPNPEGSQKD GNFSCQRVLF KCKEDVIPDN KQIQQCQEGT AVKPAYVSFC AQINNIFSVL DKVCENKTTV VSLKNTTESF VPVLKQISMW TKFTKEETSS LATVFLESVE SMTLASFWKP SANVTPAVRA EYLDIESKVI NKECSEENVT LDLVAKGDKM KIGCSTIEES ESTETTGVAF VSFVGMESVL NERFFQDHQA PLTTSEIKLK MNSRVVGGIM TGEKKDGFSD PIIYTLENVQ PKQKFERPIC VSWSTDVKGG RWTSFGCVIL EASETYTICS CNQMANLAVI MASGELTMDF SLYIISHVGI IISLVCLVLA IATFLLCRSI RNHNTYLHLH LCVCLLLAKT LFLAGIHKTD NKTGCAIIAG FLHYLFLACF FWMLVEAVIL FLMVRNLKVV NYFSSRNIKM LHICAFGYGL PMLVVVISAS VQPQGYGMHN RCWLNTETGF IWSFLGPVCT VIVINSLLLT WTLWILRQRL SSVNAEVSTL KDTRLLTFKA FAQLFILGCS WVLGIFQIGP VAGVMAYLFT IINSLQGAFI FLIHCLLNGQ VREEYKRWIT GKTKPSSQSQ TSRILLSSMP SASKTG	P	Homo sapiens
91	965	G Protein-Coupled Receptor GPR30	NM_001505	ggaaaacgac acctagaagt aggagtgaga ttcgctgaag ttcccttctg aggaagaccc acccctccgc ctggagagcc ggggctggcg gtgcctgagg acccсttcgg cctggacagc ccacgcgggc ttgggggcc tcgctctgcc ctcatggggc ggccatcggt tcccgaagcg gcgagtgaaa attcaaatgg ccagtagggg gcgcactcgg aagtggccgc cccgcatgag gcagttcagc ggccccgaga gtccggggag ggaggtttat tctccgcctg cacgagactg tgaaatccgc aaccatgagc aggagaggcg gccctggtgg ggaagaggcc accaacatct ggacggcagg tacccagaga gtgagcagct ccacgcggga ctgtgcacgg tggccgacac	A	Homo sapiens

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cctaaagcaa atctgccacc gtgggggaac tgacgctgga gatgcaaggt gctggtgggt
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ccataaaatg taagaaaagc tgatgaggct ggtgacgttc agcctttgtc aataaacctg
tcatgtgcgg atcctt

92 965 G Protein- NP_001496.1 MDVTSQARGV GLEMYPGTAQ PAAPNTTSPE LNLSHPLLGT ALANGTGELS EHQQYVIGLF P Homo

		Coupled Receptor GPR30		LSCLYTIFLF PIGFVGNILI LVVNISFREK MTIPDLYFIN LAVADLILVA DSLIEVFNLH ERYYDIAVLC TFMSLFLQVN MYSSVFFLTW MSFDRYIALA RAMRCSLFRT KHHARLSCGL IWMASVSATL VPFTAVHLQH TDEACFCFAD VREVQWLEVT LGFIVPFAII GLCYSLIVRV LVRAHRHRGL RPRRQKALRM ILAVVLVFFV CWLPENVFIS VHLLQRTQPG AAPCKQSFRH AHPLTGHIVN LAAFSNSCLN PLIYSFLGET FRDKLRLYIE QKTNLPALNR FCHAALKAVI PDSTEQSDVR FSSAV		sapiens
93	978	Cholecystokinin A Receptor	NM_000730	ggaatggctg aaaaagccca cacctggaaa tcactccctc cctgctcctc cacggcaggt tgcatctgcg agacgcttcg gtcattagag gaatgagccg ggagtgagca attcaccagc tctccagcac ttggtggaaa gcagcaggca aggatggatg tggttgacag ccttcttgtg aatggaagca acatcactcc tccctgtgaa ctcgggctcg aaaatgagac gcttttctgc ttggatcagc cccgtccttc caaagagtgg cagccagcgg tgcagattct cttgtactcc ttgatattcc tgctcagcgt gctgggaaac acgctggtca tcaccgtgct gattcggaac aagcggatgc ggacggtcac caacatcttc ctcctctccc tggctgtcag cgacctcatg ctctgtctct tctgcatgcc gttcaacctc atccccaatc tgctcaagga tttcatcttc gggagcgccg tttgcaagac caccacctac ttcatgggca cctctgtgag tgtatctacc tttaatctgg tagccatatc tctagagaga tatggtgcga tttgcaaacc cttacagtcc cgggtctggc agacaaaatc ccatgctttg aaggtgattg ctgctacctg gtgcctttcc tttaccatca tgactccgta ccccatttat agcaacttgg tgccttttac caaaaataac aaccagaccg cgaatatgtg ccgctttcta ctgccaaatg atgttatgca gcagtcctgg cacacattcc tgttactcat cctctttctt attcctggaa ttgtgatgat ggtggcatat ggattaatct ctttggaact ctaccaggga ataaaatttg aggctagcca gaagaagtct gctaaagaaa ggaaacctag caccaccagc agcggcaaat atgaggacag cgatgggtgt tacctgcaaa agaccaggcc cccgaggaag ctggagctcc ggcagctgtc caccggcagc agcagcaggg ccaaccgcat ccggagtaac agctccgcag ccaacctgat ggccaagaaa agggtgatcc gcatgctcat cgtcatcgtg gtcctcttct tcctgtgctg gatgcccatc ttcagcgcca acgcctggcg ggcctacgac accgcctccg cagagcgccg cctctcagga acccccattt ccttcatcct cctcctgtcc tacacctcct cctgcgtcaa ccccatcatc tactgcttca tgaacaaacg cttccgcctc ggcttcatgg ccaccttccc ctgctgcccc aatcctggtc cccaggggc gaggggagag gtgggggagg aggaggaagg cgggaccaca ggagcctctc tgtccaggtt ctcgtacagc catatgagtg cctcggtgcc accccagtga gatgtcccct gaccctccac cgcagaagga aggcagggag gaggcagaga agaaagaacg gaagaagaga tcaggaagag aaggagcaga gcagagctga tggagaagga aggctccatc tccagtggga actcttcaag gtctcttttc atccttcatc tgattccaga gcactgctcc agtggggcca tgattggttt ctaggcagtt caaagcagga tatgttaagt aacactcaac catcag	A	Homo sapiens
94	978	Cholecystokinin A Receptor	NP_000721.1	MDVVDSLLVN GSNITPPCEL GLENETLFCL DQPRPSKEWQ PAVQILLYSL IFLLSVLGNT LVITVLIRNK RMRTVTNIFL LSLAVSDLML CLFCMPFNLI PNLLKDFIFG SAVCKTTTYF MGTSVSVSTF NLVAISLERY GAICKPLQSR VWQTKSHALK VIAATWCLSF TIMTPYPIYS NLVPFTKNNN QTANMCRFLL PNDVMQQSWH TFLLLILFLI PGIVMMVAYG LISLELYQGI KFEASQKKSA KERKPSTTSS GKYEDSDGCY LQKTRPPRKL ELRQLSTGSS SRANRIRSNS SAANLMAKKR VIRMLIVIVV LFFLCWMPIF SANAWRAYDT ASAERRLSGT PISFILLLSY	P	Homo sapiens

				TSSCVNPIIY CFMNKRFRLG FMATFPCCPN PGPPGARGEV GEEEEGGTTG ASLSRFSYSH MSASVPPQ	
95	1103	Corticotropin releasing factor Receptor 2	NM_001883	atggacgcgg cactgctcca cagcctgctg gaggccaact gcagcctggc gctggctgaa A gagctgctct tggacggctg gggccaccc ctggaccccg agggtcccta ctcctactgc aacacgacct tggaccagat cggaacgtgc tggccccgca gcgctgccgg agccctcgtg gagaggccgt gccccgagta cttcaacggc gtcaagtaca acacgacccg gaatgcctat cgagaatgct tggagaatgg gacgtgggcc tcaaagatca actactcaca gtgtgagccc attttggatg acaagcagag gaagtatgac ctgcactacc gcatcgccct tgtcgtcaac tacctgggcc actgcgtatc tgtggcagcc ctggtggccg ccttcctgct tttcctggcc ctgcggagca ttcgctgtct gcggaatgtg attcactgga acctcatcac cacctttatc ctgcgaaatg tcatgtggtt cctgctgcag ctcgttgacc atgaagtgca cgagagcaat gaggtctggt gccactgcat caccaccatc ttcaactact tcgtggtgac caacttcttc tggatgtttg tggaaggctg ctacctgcac acggccattg tcatgaccta ctccactgag cgcctgcgca agtgcctctt cctcttcatc ggatggtgca tcccccttccc catcatcgtc gcctgggcca tcggcaagct ctactatgag aatgaacagt gctggtttgg caaggagcct ggcgacctgg tggactacat ctaccaaggc cccatcattc tcgtgctcct gatcaatttc gtatttctgt tcaacatcgt caggatccta atgacaaagt tacgcgcgtc caccacatcc gagacaatcc agtacaggaa ggcagtgaag gccaccctgg tgctcctgcc cctcctgggc atcacctaca tgctcttctt cgtcaatccc ggggaggacg acctgtcaca gatcatgttc atctatttca actccttcct gcagtcgttc cagggtttct tcgtgtctgt cttctactgc ttcttcaatg gagaggtgcg ctcagccgtg aggaagaggt ggcaccgctg gcaggaccat cactcccttc gagtccccat ggcccgggcc atgtccatcc ctacatcacc cacacggatc agcttccaca gcatcaagca gacggccgct gtgtgacccc tcggtcgccc acctgcacag ctcccctgtc ctcctccacc ttcttcctct gggttctctg tgctgggcag gctctcgtgg ggcaggagat gggaggggag agaccagctc tccagcctgg caggaaagag gggtgcggc agccaagggg gactgcaagg gacagggatg agtgggggcc accaggctca gcgcaagagg aagcagaggg aattcacagg acccccctgag aagagccagt cagatgtctg caggcatttg cccatcccag cctctctggc cagggcctta ctgggcccag agcagagaag gacctgtcca acacacacag ctatttatag tagcagacac agggctcccc tgccctactc atggagccag cagccaggca atggtgtggc cctgcactgg cccttggact ccacactcag tggtgccctg cagttgggtg ggttaacgcc aagcaaagga tcagtttggc tgccttatcc cagggctgtc acctagagag gctcacttgt accccacccct gttcctgtgt cccctcccca gccatcctcc ccgccttggg ggctccatga aggatgcagg cttccaggcc tggcttcctc tcttgggaga ccccttctct gcctagtcca cagattaggc aatcaaggaa gacgccatca gggaagccac atccttagtc aaccagttgc atcgtgcggg gcaaaatgag gagcagaggc atggaggagg gaggcgtggg atgggaatag cagaaccacc atgtcttcag tgattgaaac tcatacccca ttgccctttg ccctccagtc tccccttcag aaacatctct gctctctgtg aaataaacca tgcctcttgg	Homo sapiens
96	1103	Corticotropin releasing factor	NP_001874.1	MDAALLHSLL EANCSLALAE ELLLDGWGPP LDPEGPYSYC NTTLDQIGTC WPRSAAGALV P ERPCPEYFNG VKYNTTRNAY RECLENGTWA SKINYSQCEP ILDDKQRKYD LHYRIALVVN YLGHCVSVAA LVAAFLLFLA LRSIRCLRNV IHWNLITTFI LRNVMWFLLQ LVDHEVHESN	Homo sapiens

		Receptor 2		EVWCHCITTI FNYFVVTNFF WMFVEGCYLH TAIVMTYSTE RLRKCLFLFI GWCIPFPIIV AWAIGKLYYE NEQCWFGKEP GDLVDYIYQG PIILVLLINF VFLFNIVRIL MTKLRASTTS ETIQYRKAVK ATLVLLPLLG ITYMLFFVNP GEDDLSQIMF IYFNSFLQSF QGFFVSVFYC FFNGEVRSAV RKRWHRWQDH HSLRVPMARA MSIPTSPTRI SFHSIKQTAA V	
97	1240	Dopamine Receptor D1	NM_000794	ggctcgctgc ctcgcattgc cacaggctcc tgagaggtcg cgggcagtgc ctgcggggag A gcgcggggcc ctgctctgta gggctgaagg ccgcccgagg ttcgccaagg ctctgggctc tcgaaaggaa gccaagaaaa gaagctgccc aggtgaccag tcctgggagt gctctctccc aaggaagctc cgagcgccca ggagccctta gccggggtct agtgcccttt gaacaatctc cagctcttca aggaagtggg ctgccgccgc ctctcttggg acctggcctg ggatcctttc cccaaacgca ccccggcgat ttttgcgcac cgggagccga acccctgctg cgcgcagctg gctgggctca ggcgcgcttc ctcaacgttt cggagccgct gcccccagcg aagtccacat tccaagctcc aggggctttg agagagacga ccccaaggca aggcgtttgg agagctgctg aggagccagg ggcttggagg agcgagaaga catgtatttt cagctgagtc tcagaagggg agaatctcct gtcaccacca gaaaagcaac agccccgaaa tgtgattgca actgactagc agagcagagg cccaggagtc actggattga tgatttagaa tatgctaaaa agccagtgct ttatttgggg aattcagggg ctttctggtg cccaagacag tgacctgcag atgaggactc tgaacacctc tgccatggac gggactgggc tggtggtgga gagggacttc tctgttcgta tcctcactgc ctgtttccta tcgctgctca tcctgtccac gctcctgggg aacacgctgg tctgtgctgc cgttatcagg ttccgacacc tgcggtccaa ggtgaccaac ttctttgtca tctccttggc tgtgtcagat ctcttggtgg cagtcctggt catgccctgg aaggcagtgg ctgagattgc tggcttctgg ccctttgggt ccttctgtaa catctgggtg gcctttgaca tcatgtgctc cactgcatcc atcctcaacc tctgtgtgat cagcgtggac aggtattggg ctatctccag cccttttccgg tatgagagaa agatgacccc caaggcagcc ttcatcctga tcagtgtggc atggaccttg tctgtactca tctccttcat cccagtgcag ctcagctggc acaaggcaaa acccacaagc ccctctgatg gaaatgccac ttccctggct gagaccatag acaactgtga ctccagcctc agcaggacat atgccatctc atcctctgta ataagctttt acatccctgt ggccatcatg attgtcacct acaccaggat ctacaggatt gctcagaaac aaatacggcg cattgcggcc ttggagaggg cagcagtcca cgccaagaat tgccagacca ccacaggtaa tggaaagcct gtcgaatgtt ctcaaccgga aagttctttt aagatgtcct tcaaaagaga aactaaagtc ctgaagactc tgtcggtgat catgggtgtg tttgtgtgct gttggctacc tttcttcatc ttgaactgca ttttgccctt ctgtgggtct ggggagacgc agcccttctg cattgattcc aacacctttg acgtgtttgt gtggtttggg tgggctaatt catccttgaa ccccatcatt tatgccttta atgctgattt tcggaaggca ttttcaaccc tcttaggatg ctacagactt tgccctgcga cgaataatgc catagagacg gtgagtatca ataacaatgg ggccgcgatg ttttccagcc atcatgagcc acgaggctcc atctccaagg agtgcaatct ggtttacctg atcccacatg ctgtgggctc ctctgaggac ctgaaaaagg aggaggcagc tggcatcgcc agacccttgg agaagctgtc cccagcccta tcggtcatat tggactatga cactgacgtc tctctggaga agatccaacc catcacacaa aacggtcagc acccaacctg aactcgcaga tgaatcctgc cacacatgct catcccaaaa gctagaggag attgctctgg ggtttgctat taagaaacta aggtacggtg agactctgag gtgtcaggag agccctctgc tgctttccaa cacacaatta actccgtttc caaatacatt ccagtgtatt	Homo sapiens

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98	1240	Dopamine Receptor D1	NP_000785.1	MRTLNTSAMD GTGLVVERDF SVRILTACFL SLLILSTLLG NTLVCAAVIR FRHLRSKVTN FFVISLAVSD LLVAVLVMPW KAVAEIAGFW PFGSFCNIWV AFDIMCSTAS ILNLCVISVD RYWAISSPFR YERKMTPKAA FILISVAWTL SVLISFIPVQ LSWHKAKPTS PSDGNATSLA ETIDNCDSSL SRTYAISSSV ISFYIPVAIM IVTYTRIYRI AQKQIRRIAA LERAAVHAKN CQTTTGNGKP VECSQPESSF KMSFKRETKV LKTLSVIMGV FVCCWLPFFI LNCILPFCGS GETQPFCIDS NTFDVFVWFG WANSSLNPII YAFNADFRKA FSTLLGCYRL CPATNNAIET VSINNNGAAM FSSHHEPRGS ISKECNLVYL IPHAVGSSED LKKEEAAGIA RPLEKLSPAL SVILDYDTDV SLEKIQPITQ NGQHPT	P	Homo sapiens
99	1241	Dopamine Receptor D5	NM_000798	ggcacgaggc agggctgaag ttgggaccgc gcacagaccg cccctgcagt ccagcccgaa atgctgccgc caggcagcaa cggcaccgcg tacccggggc agttcgctct ataccagcag ctggcgcagg ggaacgccgt gggggctcg gcgggggcac cgccactggg gccctcacag gtggtcaccg cctgcctgct gaccctactc atcatctgga ccctgctggg caacgtgctg gtgtgcgcag ccatcgtgcg gagccgccac ctgcgcgcca acatgaccaa cgtcttcatc gtgtctctgg ccgtgtcaga ccttttcgtg gcgctgctgg tcatgccctg gaaggcagtc gccgaggtgg ccggttactg gccctttgga gcgttctgcg acgtctgggt ggccttcgac atcatgtgct ccactgcctc catcctgaac ctgtgcgtca tcagcgtgga ccgctactgg gccatctcca ggcccttccg ctacaagcgc aagatgactc agcgcatggc cttggtcatg gtcggcctgg catggacctt gtccatcctc atctccttca ttccggtcca gctcaactgg cacagggacc aggcggcctc ttggggcggg ctggacctgc caaacaacct ggccaactgg acgccctggg aggaggactt ttgggagccc gacgtgaatg cagagaactg tgactccagc ctgaatcgaa cctacgccat ctcttcctcg ctcatcagct tctacatccc cgttgccatc atgatcgtga cctacacgcg catctaccgc atcgcccagg tgcagatccg caggatttcc tccctggaga gggccgcaga gcacgcgcag agctgccgga gcagcgcagc ctgcgcgccc gacaccagcc tgcgcgcttc catcaagaag gagaccaagg ttctcaagac cctgtcggtg atcatggggg tcttcgtgtg ttgctggctg cccttcttca tccttaactg catggtccct ttctgcagtg gacaccctga aggccctccg gccggcttcc cctgcgtcag tgagaccacc ttcgacgtct tcgtctggtt cggctgggct aactcctcac tcaaccccgt catctatgcc ttcaacgccg actttcagaa ggtgtttgcc cagctgctgg ggtgcagcca cttctgctcc cgcacgccgg tggagacggt gaacatcagc aatgagctca tctcctacaa ccaagacatc gtcttccaca aggaaatcgc agctgcctac atccacatga tgcccaacgc cgttaccccc ggcaaccggg aggtggacaa cgacgaggag gagggtcctt tcgatcgcat gttccagatc	A	Homo sapiens

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				ccatagctta agaagtatcc ctgatttatt ctggtgtcta ataaacacag attatttgta		
				aaaaaaaaaa aaaaaaaaaa aa		
100	1241	Dopamine Receptor D5	NP_000789.1	MLPPGSNGTA YPGQFALYQQ LAQGNAVGGS AGAPPLGPSQ VVTACLLTLL IIWTLLGNVL	P	Homo sapiens
				VCAAIVRSRH LRANMTNVFI VSLAVSDLFV ALLVMPWKAV AEVAGYWPFG AFCDVWVAFD		
				IMCSTASILN LCVISVDRYW AISRPFRYKR KMTQRMALVM VGLAWTLSIL ISFIPVQLNW		
				HRDQAASWGG LDLPNNLANW TPWEEDFWEP DVNAENCDSS LNRTYAISSS LISFYIPVAI		
				MIVTYTRIYR IAQVQIRRIS SLERAAEHAQ SCRSSAACAP DTSLRASIKK ETKVLKTLSV		
				IMGVFVCCWL PFFILNCMVP FCSGHPEGPP AGFPCVSETT FDVFVWFGWA NSSLNPVIYA		
				FNADFQKVFA QLLGCSHFCS RTPVETVNIS NELISYNQDI VFHKEIAAAY IHMMPNAVTP		
				GNREVDNDEE EGPFDRMFQI YQTSPDGDPV AESVWELDCE GEISLDKITP FTPNGFH		
101	1242	Dopamine Receptor D2	NM_000795	agagcctggc cacccagtgg ctccaccgcc ctgatggatc cactgaatct gtcctggtat	A	Homo sapiens
				gatgatgatc tggagaggca gaactggagc cggcccttca acgggtcaga cgggaaggcg		
				gacagacccc actacaacta ctatgccaca ctgctcaccc tgctcatcgc tgtcatcgtc		
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				tgggttgtct acctggaggt ggtaggtgag tggaaattca gcaggattca ctgtgacatc		
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				actgcctctg ccacactctg acgcaaaacc actttccttt tctattcctt ctggcctttc		
				ctctctcctg tttcccttcc cttccactgc ctctgcctta gaggagccca cggctaagag		
				gctgctgaaa accatctggc ctggcctggc cctgccctga ggaaggaggg gaagctgcag		
				cttgggagag cccctggggc ctagactctg taacatcact atccgatgca ccaaactaat		
				aaaactttga cgagtcacct tc		
102	1242	Dopamine Receptor D2	NP_000786.1	MDPLNLSWYD DDLERQNWSR PFNGSDGKAD RPHYNYYATL LTLLIAVIVF GNVLVCMAVS	P	Homo sapiens
				REKALQTTTN YLIVSLAVAD LLVATLVMPW VVYLEVVGEW KFSRIHCDIF VTLDVMMCTA		
				SILNLCAISI DRYTAVAMPM LYNTRYSSKR RVTVMISIVW VLSFTISCPL LFGLNNADQN		
				ECIIANPAFV VYSSIVSFYV PFIVTLLVYI KIYIVLRRRR KRVNTKRSSR AFRAHLRAPL		
				KGNCTHPEDM KLCTVIMKSN GSFPVNRRRV EAARRAQELE MEMLSSTSPP ERTRYSPIPP		
				SHHQLTLPDP SHHGLHSTPD SPAKPEKNGH AKDHPKIAKI FEIQTMPNGK TRTSLKTMSR		
				RKLSQQKEKK ATQMLAIVLG VFIICWLPFF ITHILNIHCD CNIPPVLYSA FTWLGYVNSA		
				VNPIIYTTFN IEFRKAFLKI LHC		
103	1243	Dopamine Receptor D3	NM_000796	taaagaaaac ggatacattc gaaagcagct atgaaacatg cactaaggtc taatagggaa	A	Homo sapiens
				gctggaaaag cagcactcaa gtaatttcac cttagaggca aaaatgggtg atttctttct		
				gttcatttca tagtttctga gtcctgagaa aggcaaagtt tgctttgctt gggtatgtct		
				gctgtcagta aatggctgca ggagccgaag tggtaaactc ctcggtctcc agaaatcaga		
				agaaaatttt aggaagcccc ttggcatcac gcacctccct ctgggctatg gcatctctga		
				gtcagctgag tagccacctg aactacacct gtggggcaga gaactccaca ggtgccagcc		
				aggcccgccc acatgcctac tatgccctct cctactgcgc gctcatcctg gccatcgtct		
				tcggcaatgg cctggtgtgc atggctgtgc tgaaggagcg ggccctgcag actaccacca		
				actacttagt agtgagcctg gctgtggcag acttgctggt ggccaccttg gtgatgccct		
				gggtggtata cctggaggtg acaggtggag tctggaattt cagccgcatt tgctgtgatg		
				tttttgtcac cctggatgtc atgatgtgta cagccagcat ccttaatctc tgtgccatca		
				gcatagacag gtacactgca gtggtcatgc ccgttcacta ccagcatggc acgggacaga		

				gctcctgtcg gcgcgtggcc ctcatgatca cggccgtctg ggtactggcc tttgctgtgt		
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				accctgattt tgtcatctac tcttcagtgg tgtccttcta cctgcccttt ggagtgactg		
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				ccctgagtcc caccatagcg cccaagctca gcttagaagt tcgaaaactc agcaatggca		
				gattatcgac atctttgaag ctggggcccc tgcaacctcg gggagtgcca cttcgggaga		
				agaaggcaac ccaaatggtg gccattgtgc ttggggcctt cattgtctgc tggctgccct		
				tcttcttgac ccatgttctc aatacccact gccagacatg ccacgtgtcc ccagagcttt		
				acagtgccac gacatggctg ggctacgtga atagcgccct caaccctgtg atctatacca		
				ccttcaatat cgagttccgg aaagccttcc tcaagatcct gtcttgctga gggagc		
104	1243	Dopamine Receptor D3	NP_000787.1	MASLSQLSSH LNYTCGAENS TGASQARPHA YYALSYCALI LAIVFGNGLV CMAVLKERAL	P	Homo sapiens
				QTTTNYLVVS LAVADLLVAT LVMPWVVYLE VTGGVWNFSR ICCDVFVTLD VMMCTASILN		
				LCAISIDRYT AVVMPVHYQH GTGQSSCRRV ALMITAVWVL AFAVSCPLLF GFNTTGDPTV		
				CSISNPDFVI YSSVVSFYLP FGVTVLVYAR IYVVLKQRRR KRILTRQNSQ CNSVRPGFPQ		
				QTLSPDPAHL ELKRYYSICQ DTALGGPGFQ ERGGELKREE KTRNSLSPTI APKLSLEVRK		
				LSNGRLSTSL KLGPLQPRGV PLREKKATQM VAIVLGAFIV CWLPFFLTHV LNTHCQTCHV		
				SPELYSATTW LGYVNSALNP VIYTTFNIEF RKAFLKILSC		
105	1244	Dopamine Receptor D4	NM_000797	atggggaacc gcagcaccgc ggacgcggac gggctgctgg ctgggcgcgg gccggccgcg	A	Homo sapiens
				ggggcatctg cgggggcatc tgcggggctg gctgggcagg gcgcggcggc gctggtgggg		
				ggcgtgctgc tcatcggcgc ggtgctcgcg gggaactcgc tcgtgtgcgt gagcgtggcc		
				accgagcgcg ccctgcagac gcccaccaac tccttcatcg tgagcctggc ggccgccgac		
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				cccgacgccg tcagagccgc cgcgctccca ccccagactc caccgcagac ccgcaggagg		
				cggcgtgcca agatcaccgg ccgggagcgc aaggccatga gggtcctgcc ggtggtggtc		
				ggggccttcc tgctgtgctg gacgcccttc ttcgtggtgc acatcacgca ggcgctgtgt		

				cctgcctgct ccgtgccccc gcggctggtc agcgccgtca cctggctggg ctacgtcaac agcgccctca accccgtcat ctacactgtc ttcaacgccg agttccgcaa cgtcttccgc aaggccctgc gtgcctgctg ctgagccggg cacccccgga cgcccccccgg cctgatggcc aggcctcagg gaccaaggag atggggaggg cgcttttgta cgttaattaa acaaattcct tccc		
106	1244	Dopamine Receptor D4	NP_000788.1	MGNRSTADAD GLLAGRGPAA GASAGASAGL AGQGAAALVG GVLLIGAVLA GNSLVCVSVA TERALQTPTN SFIVSLAAAD LLLALLVLPL FVYSEVQGGA WLLSPRLCDA LMAMDVMLCT ASIFNLCAIS VDRFVAVAVP LRYNRQGGSR RQLLLIGATW LLSAAVAAPV LCGLNDVRGR DPAVCRLEDR DYVVYSSVCS FFLPCPLMLL LYWATFRGLQ RWEVARRAKL HGRAPRRPSG PGPPSPTPPA PRLPQDPCGP DCAPPAPGLP RGPCGPDCAP AAPGLPPDPC GPDCAPPAPG LPQDPCGPDC APPAPGLPRG PCGPDCAPPA PGLPQDPCGP DCAPPAPGLP PDPCGSNCAP PDAVRAAALP PQTPPQTRRR RRAKITGRER KAMRVLPVVV GAFLLCWTPF FVVHITQALC PACSVPPRLV SAVTWLGYVN SALNPVIYTV FNAEFRNVFR KALRACC	P	Homo sapiens
107	1267	Opioid Receptor, delta 1 (OPRD1)	NM_000911	ccgaggagcc tgcgctgctc ctggctcaca gcgctccggg cgaggagagc gggcggaccg gggggctggg ccggtgcggg cggcgaggca ggcggacgag gcgcagagac agcggggcgg ccggggcgcg gcacgcggcg ggtcggggcc ggcctctgcc ttgccgctcc cctcgcgtcg gatccccgcg cccaggcagc cggtggagag ggacgcggcg gacgccggca gccatggaac cggccccctc cgccggcgcc gagctgcagc cccgctcttt cgccaacgcc tcggacgcct accctagcgc cttccccagc gctggcgcca atgcgtcggg gccgccagga ccggggagcg cctcgtccct cgccctggca atcgccatca ccgcgctcta ctcggccgtg tgcgccgtgg ggctgctggg caacgtgctt gtcatgttcg gcatcgtccg gtacactaag atgaagacgg ccaccaacat ctacatcttc aacctggcct tagccgatgc gctggccacc agcacgctgc ctttccagag tgccaagtac ctgatggaga cgtggccctt cggcgagctg ctctgcaagg ctgtgctctc catcgactac tacaatatgt tcaccagcat cttcacgctc accatgatga gtgttgaccg ctacatcgct gtctgccacc ctgtcaaggc cctggacttc cgcacgcctg ccaaggccaa gctgatcaac atctgtatct gggtcctggc ctcaggcgtt ggcgtgccca tcatggtcat ggctgtgacc cgtccccggg acggtgcagt ggtgtgcatg ctccagttcc ccagccccag ctggtactgg gacacggtga ccaagatctg cgtgttcctc ttcgccttcg tggtgcccat cctcatcatc accgtgtgct atggcctcat gctgctgcgc ctgcgcagtg tgcgcctgct gtcgggctcc aaggagaagg accgcagcct gcggcgcatc acgcgcatgg tgctggtggt tgtgggcgcc ttcgtggtgt gttgggcgcc catccacatc ttcgtcatcg tctggacgct ggtggacatc gaccggcgcg acccgctggt ggtggctgcg ctgcacctgt gcatcgcgct gggctacgcc aatagcagcc tcaaccccgt gctctacgct ttcctcgacg agaacttcaa gcgctgcttc cgccagctct gccgcaagcc ctgcggccgc ccagacccca gcagcttcag ccggccccgc gaagccacgg cccgcgagcg tgtcaccgcc tgcaccccgt ccgatggtcc cggcggtggc cgtgccgcct gaccaggcca tccggccccc agacgcccct ccctagttgt acccggaggc cacatgagtc ccagtgggag gcgcgagcca tgatgtggag tggggccagt agataggtcg gagggctttg ggaccgccag atggggcctc tgtttcggag acgggaccgg gccgctagat gggcatgggg tgggcctctg gtttggggcg aggcagagga cagatcaatg gcgcagtgcc tctggtctgg gtgcccccgt ccacggctct aggtggggcg ggaaagccag tgactccagg agaggagcgg gacctgtggc tctacaactg agtccttaaa	A	Homo sapiens

				cagggcatct ccaggaaggc ggggcttcaa ccttgagaca gcttcggttt ctaacttgga gccggacttt cggagttggg gggtccgggg ccc		
108	1267	Opioid Receptor, delta 1 (OPRD1)	NP_000902.1	MEPAPSAGAE LQPPLFANAS DAYPSAFPSA GANASGPPGP GSASSLALAI AITALYSAVC AVGLLGNVLV MFGIVRYTKM KTATNIYIFN LALADALATS TLPFQSAKYL METWPFGELL CKAVLSIDYY NMFTSIFTLT MMSVDRYIAV CHPVKALDFR TPAKAKLINI CIWVLASGVG VPIMVMAVTR PRDGAVVCML QFPSPSWYWD TVTKICVFLF AFVVPILIIT VCYGLMLLRL RSVRLLSGSK EKDRSLRRIT RMVLVVVGAF VVCWAPIHIF VIVWTLVDID RRDPLVVAAL HLCIALGYAN SSLNPVLYAF LDENFKRCFR QLCRKPCGRP DPSSFSRPRE ATARERVTAC TPSDGPGGGR AA	P	Homo sapiens
109	1424	Duffy Antigen	NM_002036	gggcctgaac caaacggtgc catggggaac tgtctgcaca gggtgagtat ggggccaggc cccagagtcc cttatcccta tgcccctcat ttcccctgct gtttgcccct cagtctttat atctcttcct tttcctcctc atcttttctc ccttcccgct tttttcctct tccttcaaag tctttttcct tctctccttc ctatgctagc ctcctagctc cctcttgtgt ccctcccttt gcctttgagt cagttccatc ctggtctctt ggtgcctttc cttctgacct tgcactgctc ctccagcccc agctgccctg gcttccccag gactgttcct gctccggctc ttcaggctcc ctgctttgtc cttttccact gtccgcactg catctgactc ctgcagagac cttgttctcc cacccgacct tcctctctgt cctcccctcc cacctgcccc tcaattccca ggagactctt ccggtgtaac tctgatggcc tcctctgggt atgtcctcca ggcggagctc tccccctcaa ctgagaactc aagtcagctg gacttcgaag atgtatggaa ttcttcctat ggtgtgaatg attccttccc agatggagac tatgatgcca acctggaagc agctgccccc tgccactcct gtaacctgct ggatgactct gcactgccct tcttcatcct caccagtgtc ctgggtatcc tagctagcag cactgtcctc ttcatgcttt tcagacctct cttccgctgg cagctctgcc ctggctggcc tgtcctggca cagctggctg tgggcagtgc cctcttcagc attgtggtgc ccgtcttggc cccagggcta ggtagcactc gcagctctgc cctgtgtagc ctgggctact gtgtctggta tggctcagcc tttgcccagg ctttgctgct agggtgccat gcctccctgg gccacagact gggtgcaggc caggtcccag gcctcaccct ggggctcact gtgggaattt ggggagtggc tgccctactg acactgcctg tcaccctggc cagtggtgct tctggtggac tctgcaccct gatatacagc acggagctga aggctttgca ggccacacac actgtagcct gtcttgccat ctttgtcttg ttgccattgg gtttgtttgg agccaagggg ctgaagaagg cattgggtat ggggccaggc ccctggatga atatcctgtg ggcctggttt attttctggt ggcctcatgg ggtggttcta ggactggatt tcctggtgag gtccaagctg ttgctgttgt caacatgtct ggcccagcag gctctggacc tgctgctgaa cctggcagaa gccctggcaa ttttgcactg tgtggctacg cccctgctcc tcgccctatt ctgccaccag gccacccgca ccctcttgcc ctctctgccc ctccctgaag gatggtcttc tcatctggac acccttggaa gcaaatccta gttctcttcc cacctgtcaa cctgaattaa agtctacact gcctttgtg	A	Homo sapiens
110	1424	Duffy Antigen	NP_002027.1	MASSGYVLQA ELSPSTENSS QLDFEDVWNS SYGVNDSFPD GDYDANLEAA APCHSCNLLD DSALPFFILT SVLGILASST VLFMLFRPLF RWQLCPGWPV LAQLAVGSAL FSIVVPVLAP GLGSTRSSAL CSLGYCVWYG SAFAQALLLG CHASLGHRLG AGQVPGLTLG LTVGIWGVAA LLTLPVTLAS GASGGLCTLI YSTELKALQA THTVACLAIF VLLPLGLFGA KGLKKALGMG PGPWMNILWA WFIFWWPHGV VLGLDFLVRS KLLLLSTCLA QQALDLLLNL AEALAILHCV ATPLLLALFC HQATRTLLPS LPLPEGWSSH LDTLGSKS	P	Homo sapiens

111	1451	EBV-Induced Gene 2	NM_004951	ggaattccct gatatacacc tggaccacca ccaatggata tacaaatggc aaacaatttt actccgccct ctgcaactcc tcagggaaat gactgtgacc tctatgcaca tcacagcacg gccaggatag taatgcctct gcattacagc ctcgtcttca tcattgggct cgtgggaaac ttactagcct tggtcgtcat tgttcaaaac aggaaaaaaa tcaactctac caccctctat tcaacaaatt tggtgatttc tgatatactt tttaccaccg ctttgcctac acgaatagcc tactatgcaa tgggctttga ctggagaatc ggagatgcct tgtgtaggat aactgcgcta gtgttttaca tcaacacata tgcaggtgtg aactttatga cctgcctgag tattgaccgc ttcattgctg tggtgcaccc tctacgctac aacaagataa aaaggattga acatgcaaaa ggcgtgtgca tatttgtctg gattctagta tttgctcaga cactcccact cctcatcaac cctatgtcaa agcaggaggc tgaaaggatt acatgcatgg agtatccaaa ctttgaagaa actaaatctc ttccctggat tctgcttggg gcatgtttca taggatatgt acttccactt ataatcattc tcatctgcta ttctcagatc tgctgcaaac tcttcagaac tgccaaacaa aacccactca ctgagaaatc tggtgtaaac aaaaaggctc tcaacacaat tattcttatt attgttgtgt ttgttctctg tttcacacct taccatgttg caattattca acatatgatt aagaagcttc gtttctctaa tttcctggaa tgtagccaaa gacattcgtt ccagatttct ctgcacttta cagtatgcct gatgaacttc aattgctgca tggacccttt tatctacttc tttgcatgta aagggtataa gagaaaggtt atgaggatgc tgaaacggca agtcagtgta tcgatttcta gtgctgtgaa gtcagcccct gaagaaaatt cacgtgaaat gacagaaacg cagatgatga tacattccaa gtcttcaaat ggaaagtgaa atggattgta ttttggttta tagtgacgta aactgtatga caaactttgc aggacttccc ttataaagca aaataattgt tcagcttcca attagtattc ttttatattt ctttcattgg gcactttccc atctccaact cggaagtaag cccaagagaa caacataaag caaacaacat aaagcacaat aaaaatgcaa ataaatattt tcatttttat ttgtaaacga atacaccaaa aggaggcgct cttaataact cccaatgtaa aaagttttgt tttaataaaa aatttaatta ttatttcttg ccaacaaatg gctagaaagg actgaataga ttatatattg ccagatgtta atactgtaac atacttttta aataacatat ttcttaaatc caaatttctc tcaatgttag atttaattcc ctcaataaca ccaatgtttt gttttgtttc gttctgggtc ataaaacttt gttaaggaac tcttttggaa taaagagcag gatgctgc	A	Homo sapiens
112	1451	EBV-Induced Gene 2	NP_004942.1	MDIQMANNFT PPSATPQGND CDLYAHHSTA RIVMPLHYSL VFIIGLVGNL LALVVIVQNR KKINSTTLYS TNLVISDILF TTALPTRIAY YAMGFDWRIG DALCRITALV FYINTYAGVN FMTCLSIDRF IAVVHPLRYN KIKRIEHAKG VCIFVWILVF AQTLPLLINP MSKQEAERIT CMEYPNFEET KSLPWILLGA CFIGYVLPLI IILICYSQIC CKLFRTAKQN PLTEKSGVNK KALNTIILII VVFVLCFTPY HVAIIQHMIK KLRFSNFLEC SQRHSFQISL HFTVCLMNFN CCMDPFIYFF ACKGYKRKVM RMLKRQVSVS ISSAVKSAPE ENSREMTETQ MMIHSKSSNG K	P	Homo sapiens
113	1486	Endothelin B Receptor	NM_000115	gagacattcc ggtgggggac tctggccagc ccgagcaacg tggatcctga gagcactccc aggtaggcat ttgccccggt gggacgcctt gccagagcag tgtgtggcag gcccccgtgg aggatcaaca cagtggctga acactgggaa ggaactggta cttggagtct ggacatctga aacttggctc tgaaactgcg cagcggccac cggacgcctt ctggagcagg tagcagcatg cagccgcctc caagtctgtg cggacgcgcc ctggttgcgc tggttcttgc ctgcggcctg tcgcggatct ggggagagga gagaggcttc ccgcctgaca gggccactcc gcttttgcaa	A	Homo sapiens

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114	1486	Endothelin B Receptor	NP_000106.1 MQPPPSLCGR ALVALVLACG LSRIWGEERG FPPDRATPLL QTAEIMTPPT KTLWPKGSNA SLARSLAPAE VPKGDRTAGS PPRTISPPPC QGPIEIKETF KYINTVVSCL VFVLGIIGNS TLLRIIYKNK CMRNGPNILI ASLALGDLLH IVIDIPINVY KLLAEDWPFG AEMCKLVPFI QKASVGITVL SLCALSIDRY RAVASWSRIK GIGVPKWTAV EIVLIWVVSV VLAVPEAIGF DIITMDYKGS YLRICLLHPV QKTAFMQFYK TAKDWWLFSF YFCLPLAITA FFYTLMTCEM LRKKSGMQIA LNDHLKQRRE VAKTVFCLVL VFALCWLPLH LSRILKLTLY NQNDPNRCEL LSFLLVLDYI GINMASLNSC INPIALYLVS KRFKNCFKSC LCCWCQSFEE KQSLEEKQSC LKFKANDHGY DNFRSSNKYS SS	P	Homo sapiens
115	1488	Endothelin A Receptor	NM_001957 gaattcgcgg ccgcctcttg cggtcccaga gtggagtgga aggtctggag ctttgggagg agacggggag gacagactgg aggcgtgttc ctccggagtt ttctttttcg tgcgagccct cgcgcgcgcg tacagtcatc ccgctggtct gacgattgtg gagaggcggt ggagaggctt catccatccc acccggtcgt cgccggggat tggggtccca gcgacacctc cccgggagaa gcagtgccca ggaagttttc tgaagccggg gaagctgtgc agccgaagcc gccgccgcgc cggagcccgg gacaccggcc accctccgcg ccacccaccc tcgctttctc cggcttcctc tggcccaggc gccgcgcgga cccggcagct gtctgcgcac gccgagctcc acggtgaaaa aaaaagtgaa ggtgtaaaag cagcacaagt gcaataagag atatttcctc aaatttgcct	A	Homo sapiens

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116	1488	Endothelin A Receptor	NP_001948.1	METLCLRASF WLALVGCVIS DNPERYSTNL SNHVDDFTTF RGTELSFLVT THQPTNLVLP SNGSMHNYCP QQTKITSAFK YINTVISCTI FIVGMVGNAT LLRIIYQNKC MRNGPNALIA SLALGDLIYV VIDLPINVFK LLAGRWPFDH NDFGVFLCKL FPFLQKSSVG ITVLNLCALS VDRYRAVASW SRVQGIGIPL VTAIEIVSIW ILSFILAIPE AIGFVMVPFE YRGEQHKTCM LNATSKFMEF YQDVKDWWLF GFYFCMPLVC TAIFYTLMTC EMLNRRNGSL RIALSEHLKQ RREVAKTVFC LVVIFALCWF PLHLSRILKK TVYNEMDKNR CELLSFLLLM DYIGINLATM NSCINPIALY FVSKKFKNCF QSCLCCCCYQ SKSLMTSVPM NGTSIQWKNH DQNNHNTDRS SHKDSMN	P	Homo sapiens
117	1598	Calcium-Sensing Receptor (CASR)	NM_000388	caacaggcac ctggctgcag ccaggaagga ccgcacgccc tttcgcgcag gagagtggaa ggagggagct gtttgccagc accgaggtct tgcggcacag gcaacgcttg acctgagtct tgcagaatga aaggcatcac aggaggcctc tgcatgatgt ggcttccaaa gactcaagga ccacccacat tacaagtctg gattgaggaa ggcagaaatg gagattcaaa caccacgtct tctattattt tattaatcaa tctgtagaca tgtgtcccca ctgcagggag tgaactgctc caagggagaa acttctggga gcctccaaac tcctagctgt ctcatccctt gccctggaga gacggcagaa ccatggcatt ttatagctgc tgctgggtcc tcttggcact cacctggcac acctctgcct acgggccaga ccagcgagcc caaaagaagg gggacattat ccttgggggg ctctttccta ttcattttgg agtagcagct aaagatcaag atctcaaatc aaggccggag tctgtggaat gtatcaggta taatttccgt gggtttcgct ggttacaggc tatgatattt gccatagagg agataaacag cagcccagcc cttcttccca acttgacgct gggatacagg atatttgaca cttgcaacac cgtttctaag gccttggaag ccaccctgag ttttgttgct caaaacaaaa ttgattcttt gaaccttgat gagttctgca actgctcaga gcacattccc	A	Homo sapiens

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118	1598	Calcium-Sensing Receptor (CASR)	NP_000379.1	MAFYSCCWVL LALTWHTSAY GPDQRAQKKG DIILGGLFPI HFGVAAKDQD LKSRPESVEC IRYNFRGFRW LQAMIFAIEE INSSPALLPN LTLGYRIFDT CNTVSKALEA TLSFVAQNKI DSLNLDEFCN CSEHIPSTIA VVGATGSGVS TAVANLLGLF YIPQVSYASS SRLLSNKNQF KSFLRTIPND EHQATAMADI IEYFRWNWVG TIAADDDYGR PGIEKFREEA EERDICIDFS ELISQYSDEE EIQHVVEVIQ NSTAKVIVVF SSGPDLEPLI KEIVRRNITG KIWLASEAWA SSSLIAMPQY FHVVGGTIGF ALKAGQIPGF REFLKKVHPR KSVHNGFAKE FWEETFNCHL QEGAKGPLPV DTFLRGHEES GDRFSNSSTA FRPLCTGDEN ISSVETPYID YTHLRISYNV YLAVYSIAHA LQDIYTCLPG RGLFTNGSCA DIKKVEAWQV LKHLRHLNFT NNMGEQVTFD ECGDLVGNYS IINWHLSPED GSIVFKEVGY YNVYAKKGER LFINEEKILW SGFSREVPFS NCSRDCLAGT RKGIIEGEPT CCFECVECPD GEYSDETDAS ACNKCPDDFW SNENHTSCIA KEIEFLSWTE PFGIALTLFA VLGIFLTAFV LGVFIKFRNT PIVKATNREL SYLLLFSLLC CFSSSLFFIG EPQDWTCRLR QPAFGISFVL CISCILVKTN RVLLVFEAKI PTSFHRKWWG LNLQFLLVFL CTFMQIVICV IWLYTAPPSS YRNQELEDEI IFITCHEGSL MALGFLIGYT CLLAAICFFF AFKSRKLPEN FNEAKFITFS MLIFFIVWIS FIPAYASTYG KFVSAVEVIA ILAASFGLLA CIFFNKIYII LFKPSRNTIE EVRCSTAAHA FKVAARATLR RSNVSRKRSS SLGGSTGSTP SSSISSKSNS EDPFPQPERQ KQQQPLALTQ QEQQQQPLTL PQQQRSQQQP RCKQKVIFGS GTVTFSLSFD EPQKNAMAHG NSTHQNSLEA QKSSDTLTRH QPLLPLQCGE TDLDLTVQET GLQGPVGGDQ RPEVEDPEEL SPALVVSSSQ SFVISGGGST VTENVVNS	P	Homo sapiens
119	1676	Formyl Peptide Receptor-Like Receptor	NM_001462	ggcacgagga acaacctatt tgcaaagttg gcgcaaacat tcctgcctga caggaccatg gacacaggtt gtagagatag agatggctct ggctgtgcat tcagcagatt ctgtagatag aattaatagg acttggatgg gattgtggtg agagaaagtg aaatgaaaga taagttctag tttggaagtt ttaacaactg aatgtttaaa ctcaaataga cacaaaatat tggaagagtg gcaggtttgg gaggatgaga caatcaactg tttggttgag ccacgttagg tttgaaatgt ctacgggatc ccgtggggag aggttatatc agactggagc accagagaga ggccaaggct gatagtttag atgaaaagag agcatgatat tttaagccct gagactggat aatatcacct atagaaagac tatatagaga taagagaggt ggggaacaag taaaagctgc gggacactcc taaatttaga gtcaaattta gagcagaaaa tactagcaaa ggggactgaa aagcggtggc caattgagct tcaaatgcaa gtgaaagtgt gttgtgtgta catttatcat ctcatggcac aggaaaaacg tgatttaagg agaaggaagc gatccaatgg gaagaagaga tccaatggat cctctatcac gaagatattg agataagaac caatatggat ttgcacccac tgcatttgca gccttgaggt cataagcatc ctcaggaaaa tgcaccaggt gctgctggca agatggaaac	A	Homo sapiens

				caacttctcc actcctctga atgaatatga agaagtgtcc tatgagtctg ctggctacac tgttctgcgg atcctcccat tggtggtgct tggggtcacc tttgtcctcg gggtcctggg caatgggctt gtgatctggg tggctggatt ccggatgaca cgcacagtca ccaccatctg ttacctgaac ctggccctgg ctgacttttc tttcacggcc acattaccat tcctcattgt ctccatggcc atgggagaaa aatggccttt tggctggttc ctgtgtaagt taattcacat cgtggtggac atcaacctct ttggaagtgt cttcttgatt ggtttcattg cactggaccg ctgcatttgt gtcctgcatc cagtctgggc ccagaaccac cgcactgtga gtctggccat gaaggtgatc gtcggacctt ggattcttgc tctagtcctt accttgccag ttttcctctt tttgactaca gtaactattc caaatgggga cacatactgt actttcaact ttgcatcctg gggtggcacc cctgaggaga ggctgaaggt ggccattacc atgctgacag ccagagggat tatccggttt gtcattggct ttagcttgcc gatgtccatt gttgccatct gctatgggct cattgcagcc aagatccaca aaaagggcat gattaaatcc agccgtccct tacgggtcct cactgctgtg gtggcttctt tcttcatctg ttggtttccc tttcaactgg ttgcccttct gggcaccgtc tggctcaaag agatgttgtt ctatggcaag tacaaaatca ttgacatcct ggttaaccca acgagctccc tggccttctt caacagctgc ctcaacccca tgctttacgt ctttgtgggc caagacttcc gagagagact gatccactcc ctgcccacca gtctggagag ggccctgtct gaggactcag ccccaactaa tgacacggct gccaattctg cttcacctcc tgcagagact gagttacagg caatgtgagg atggggtcag ggatattttg agttctgttc atcctaccct aatgccagtt ccagcttcat ctacccttga gtcatattga ggcattcaag gatgcacagc tcaagtattt attcaggaaa aatgcttttg tgtccctgat ttggggctaa gaaatagaca gtcaggctac taaaatatta gtgttatttt ttgtttttg acttctgcct ataccctggg gtaagtggag ttgggaaata caagaagaga aagaccagtg gggatttgta agacttagat gagatagcgc ataataaggg gaagacttta aagtataaag taaaatgttt gctgtaggtt ttttatagct attaaaaaaa atcagattat ggaagttttc ttctattttt agtttgctaa gagttttctg tttcttttc ttacatcatg agtggacttt gcattttatc aaatgcattt tctacatgta ttaagatggt catattattc ttcttctttt atgtaaatca ttataaataa tgttcattaa gttctgaatg ttaaactact cttgaattcc tggaataaac cacacttagt cctgatgtac tttaaatatt tatatctcac aggagttggt tagaatttct gtgtttatgt ttatatactg ttatttcact ttttctacta tccttgctaa gttttcatag aaaataagga acaaagagaa acttgtaatg gtctctgaaa aggaattgag aagtaattcc tctgattctg ttttctggtg ttatatcttt attaaatatt cagaaaaatt c		
120	1676	Formyl Peptide Receptor-Like Receptor	NP_001453.1	METNFSTPLN EYEEVSYESA GYTVLRILPL VVLGVTFVLG VLGNGLVIWV AGFRMTRTVT TICYLNLALA DFSFTATLPF LIVSMAMGEK WPFGWFLCKL IHIVVDINLF GSVFLIGFIA LDRCICVLHP VWAQNHRTVS LAMKVIVGPW ILALVLTLPV FLFLTTVTIP NGDTYCTFNF ASWGGTPEER LKVAITMLTA RGIIRFVIGF SLPMSIVAIC YGLIAAKIHK KGMIKSSRPL RVLTAVVASF FICWFPFQLV ALLGTVWLKE MLFYGKYKII DILVNPTSSL AFFNSCLNPM LYVFVGQDFR ERLIHSLPTS LERALSEDSA PTNDTAANSA SPPAETELQA M	P	Homo sapiens
121	1681	Follicle Stimulating Hormone Receptor	NM_000145	cgctgagatc tgtggaggtt tttctctgca aatgcagaaa gaaatcaggt ggatggatgc ataattatgg ccctgctcct ggtctctttg ctggcattcc tgagcttggg ctcaggatgt catcatcgga tctgtcactg ctctaacagg gtttttctct gccaagagag caaggtgaca gagattcctt ctgacctccc gaggaatgcc attgaactga ggtttgtcct caccaagctt	A	Homo sapiens

				cgagtcatcc aaaaaggtgc attttcagga tttggggacc tggagaaaat agagatctct cagaatgatg tcttggaggt gatagaggca gatgtgttct ccaaccttcc caaattacat gaaattagaa ttgaaaaggc caacaacctg ctctacatca cccctgaggc cttccagaac cttcccaacc ttcaatatct gttaatatcc aacacaggta ttaagcacct tccagatgtt cacaagattc attctctcca aaaggtttta cttgacattc aagataacat aaacatccac acaattgaaa gaaattcttt cgtggggctg agctttgaaa gtgtgattct atggctgaat aagaatggga ttcaagaaat acacaactgt gcattcaatg gaacccaact agatgcagtg aatctaagcg ataataataa tttagaagaa ttgcctaatg atgttttcca cggagcctct ggaccagtca ttctagatat ttcaagaaca aggatccatt ccctgcctag ctatggctta gaaaatctta agaagctgag ggccaggtcg acttacaact taaaaaagct gcctactctg gaaaagcttg tcgccctcat ggaagccagc ctcacctatc ccagccattg ctgtgccttt gcaaactgga gacggcaaat ctctgagctt catccaattt gcaacaaatc tattttaagg caagaagttg attatatgac tcaggctagg ggtcagagat cctctctggc agaagacaat gagtccagct acagcagagg atttgacatg acgtacactg agtttgacta tgacttatgc aatgaagtgg ttgacgtgac ctgctcccct aagccagatg cattcaaccc atgtgaagat atcatggggt acaacatcct cagagtcctg atatggttta tcagcatcct ggccatcact gggaacatca tagtgctagt gatcctaact accagccaat ataaactcac agtccccagg ttccttatgt gcaacctggc ctttgctgat ctctgcattg gaatctacct gctgctcatt gcatcagttg atatccatac caagagccaa tatcacaact atgccattga ctggcaaact ggggcaggct gtgatgctgc tggctttttc actgtctttg ccagtgagct gtcagtctac actctgacag ctatcacctt ggaaagatgg cataccatca cgcatgccat gcagctggac tgcaaggtgc agctccgcca tgctgccagt gtcatggtga tgggctggat tttgcttttt gcagctgccc tctttcccat ctttggcatc agcagctaca tgaaggtgag catctgcctg cccatggata ttgacagccc tttgtcacag ctgtatgtca tgtccctcct tgtgctcaat gtcctggcct ttgtggtcat ctgtggctgc tatatccaca tctacctcac agtgcggaac cccaacatcg tgtcctcctc tagtgacacc aggatcgcca agcgcatggc catgctcatc ttcactgact tcctctgcat ggcacccatt tctttctttg ccatttctgc ctccctcaag gtgcccctca tcactgtgtc caaagcaaag attctgctgg ttctgtttca ccccatcaac tcctgtgcca accccttcct ctatgccatc tttaccaaaa actttcgcag agatttcttc attctgctga gcaagtgtgg ctgctatgaa atgcaagccc aaatttatag gacagaaact tcatccactg tccacaacac ccatccaagg aatggccact gctcttcagc tcccagagtc accagtggtt ccacttacat acttgtccct ctaagtcatt tagcccaaaa ctaaaacaca atgtgaaaat gtatctgagt attgaatgat aattcagtcc ttgcctttga agggtatgtc acaaggagct gacagtgctt ctacacattt catctaattt aatattcctg gcataccttt aaggtaaatt ggtcaggaac tattaattcc atgtgataca ttaggaagct gaattattag taacaacaat aataattaaa gaatgcaata ctgtaaaaaa gcggccgcga att		
122	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	MALLLVSLLA FLSLGSGCHH RICHCSNRVF LCQESKVTEI PSDLPRNAIE LRFVLTKLRV IQKGAFSGFG DLEKIEISQN DVLEVIEADV FSNLPKLHEI RIEKANNLLY ITPEAFQNLP NLQYLLISNT GIKHLPDVHK IHSLQKVLLD IQDNINIHTI ERNSFVGLSF ESVILWLNKN GIQEIHNCAF NGTQLDAVNL SDNNNLEELP NDVFHGASGP VILDISRTRI HSLPSYGLEN LKKLRARSTY NLKKLPTLEK LVALMEASLT YPSHCCAFAN WRRQISELHP ICNKSILRQE	P	Homo sapiens

				VDYMTQARGQ RSSLAEDNES SYSRGFDMTY TEFDYDLCNE VVDVTCSPKP DAFNPCEDIM GYNILRVLIW FISILAITGN IIVLVILTTS QYKLTVPRFL MCNLAFADLC IGIYLLLIAS VDIHTKSQYH NYAIDWQTGA GCDAAGFFTV FASELSVYTL TAITLERWHT ITHAMQLDCK VQLRHAASVM VMGWIFAFAA ALFPIFGISS YMKVSICLPM DIDSPLSQLY VMSLLVLNVL AFVVICGCYI HIYLTVRNPN IVSSSSDTRI AKRMAMLIFT DFLCMAPISF FAISASLKVP LITVSKAKIL LVLFHPINSC ANPFLYAIFT KNFRRDFFIL LSKCGCYEMQ AQIYRTETSS TVHNTHPRNG HCSSAPRVTS GSTYILVPLS HLAQN		
123	1726	G Protein- Coupled Receptor RDC1	U67784	gccaactccg tggtggtctg ggtgaatatc caggccaaga ccacaggcta tgacacgcac tgctacatct tgaacctggc cattgccgac ctgtgggttg tcctcaccat cccagtctgg gtggtcagtc tcgtgcagca caaccagtgg cccatgggcg agctcacgtg caaagtcaca cacctcatct tctccatcaa cctcttcagc agcattttct tcctcacgtg catgagcgtg gaccgctacc tctccatcac ctacttcacc aacaccccca gcagcaggaa gaagatggta cgccgtgtcg tctgcatcct ggtgtggctg ctggccttct gcgtgtctct gcctgacacc tactacctga agaccgtcac gtctgcgtcc aacaatgaga cctactgccg gtccttctac cccgagcaca gcatcaagga gtggctgatc ggcatggagc tggtctccgt tgtcttgggc tttgccgttc ccttctccat tatcgctgtc ttctacttcc tgctggccag agccatctcg gcgtccagtg accaggagaa gcacagcagc cggaagatca tcttctccta cgtggtggtc ttccttgtct gctggttgcc ctaccacgtg gcggtgctgc tggacatctt ctccatcctg cactacatcc ctttcacctg ccggctggag cacgccctct tcacggccct gcatgtcaca cagtgcctgt cgctggtgca ctgctgcgtc aaccctgtcc tctacagctt catcaatcgc aactacaggt acgagctgat gaaggccttc atcttcaagt actcggccaa aacagggctc accaagctca tcgatgcctc cagagtctca gagacggagt actctgcctt ggagcagagc accaaatgat ctgccctgga gaggctctgg gacgggttta cttgtttttg aacagggtga tgggccctat ggttttctag agcaaagcaa agtagcttcg ggtcttgatg cttgagtaga gtgaagaggg gagcacgtgc cccctgcatc cattytctct ttctcttgat gacgcagctg tcatttggct gtgcgtgctg acagttttgc aacaggcaga gctgtgtcgc acagcagtgc tgtgcgtcag agccagctga ggacaggctt gcctggactt ctgtaagata ggattttctg tgtttcctga atttttttata tggtgatttg tatttaaatt ttaagacttt attttctcac tattggtgta ccttataaat gtatttgaaa gttaaatata ttttaaatat tgtttgggag gcatagtgct gacatatatt cagagtgttg tagttttaag gttagcgtga ctttcagttt tgactaagga tgacactaat tgttagctgt tttgaaatta tatatatata aatatataaa tatatgccag tcttggctga aatgttttat ttaccatagt tttatatctg tgtggtgttt tgtaccggca cgggatatgg aacgaaaact gctttgtaat gcagtttgtg acattaatag tattgtaaag ttacatttta aaataaacaa aaaactgttc tggactgcaa atctgcacac acaacgaaca gttgcatttc agagagttct ctcaatttgt aagttatttt tttttaataa agatttttgt ttcctaaaaa aaaaaaaaaa aaaaaa	A	Homo sapiens
124	1726	G Protein- Coupled Receptor RDC1	AAA62370.1	MDLHLFDYAE PGNFSDISWP CNSSDCIVVD TVMCPNMPNK SVLLYTLSFI YIFIFVIGMI ANSVVVWVNI QAKTTGYDTH CYILNLAIAD LWVVLTIPVW VVSLVQHNQW PMGELTCKVT HLIFSINLFS GIFFLTCMSV DRYLSITYFT NTPSSRKKMV RRVVCILVWL LAFCVSLPDT YYLKTVTSAS NNETYCRSFY PEHSIKEWLI GMELVSVVLG FAVPFSIIAV FYFLLARAIS ASSDQEKHSS RKIIFSYVVV FLVCWLPYHV AVLLDIFSIL HYIPFTCRLE HALFTALHVT	P	Homo sapiens

				QCLSLVHCCV NPVLYSFINR NYRYELMKAF IFKYSAKTGL TKLIDASRVS ETEYSALEQN AK	
125	1762	Galanin Receptor GalR1	NM_001480	atcccgctag aatccgtcca gtctctgctc gcgcaccgtg acttctaagg ggcgcggatt A tcagccgagc tgttttcgcc tctcagttgc agcagagaag cccctggcac ccgactctat ccaccaccag gaagcctccc aaaagagctc tcgccctgtg gacgactcgg aatccctgga aaagccggga gggagtcgga ggcgccagcc cactggggag gtggcgctgg gcgcgcggga tgcgcgggga gccttctctg caggagccgc acagtgcact gctgcgcgct gggcagtgcg gggaagcgcc gcgggaagga gcggctccga gcaacaggtg cagcacgcag ccgctccggg agccagggaa aaccgccggc gaagatctgg agcggtaagg cggagagaag ggtctttcca cctgcgcggc tgcagccggc ggatccctct tcccaggctc cgtggtcgcg cagcgggcgg aggcgcccgg gcaggggacc ccagtgctct cgagatcacc gtcccttccc gagaaggtcc agctccgggc tcccgaaccc accctctctc agaaggtcgc ggcgcaaaga cggtgccacc aggcacggcc accggatccc cgctcccgct ggctcgcgcc tcgggggaag ctcagactcc taaactcgca ctctccgtgc tttgcgccgg gacccctggc cacccccggc gcctgctatc ccgccctccc tccccgcgcg ccccgccgct cgccgggaca gccccgcggg ccatggagct ggcggtcggg aacctcagcg agggcaacgc gagctggccg gagccccccg ccccggagcc cgggccgctg ttcggcatcg gcgtggagaa cttcgtcacg ctggtggtgt tcggcctgat cttcgcgctg ggcgtgctgg gcaacagcct agtgatcacc gtgctggcgc gcagcaagcc gggcaagccg cggagcacca ccaacctgtt catcctcaac ctgagcatcg ccgacctggc ctacctgctc ttctgcatcc ccttccaggc caccgtgtac gcgctgccca cctgggtgct gggcgccttc atctgcaagt tcatccacta cttcttcacc gtgtccatgc tggtgagcat cttcaccctg gccgcgatgt ccgtggaccg ctacgtggcc atcgtgcact cgcggcgctc ctcctccctc agggtgtccc gcaacgcgct gctgggcgtg ggctgcatct gggcgctgtc cattgccatg gcctcgcccg tggcctacca ccagggcctc ttccacccgc gcgccagcaa ccagaccttc tgctgggagc agtggcccga ccctcgccac aagaaggcct acgtggtgtg caccttcgtc ttcggctacc tgctgccgct cctgctcatc tgcttctgct atgccaaggt ccttaatcac ttgcataaaa agttgaagaa catgtcaaag aagtctgaag catccaagaa aaagactgca cagacagttc tggtggtggt tgtggtgttt ggaatctcct ggctgccgca ccacatcatc catctctggg ctgagtttgg agttttcccg ctgacgccgg cttccttcct cttcagaatc accgcccact gcctggcgta cagcaattcc tccgtgaatc ctatcattta tgcatttctc tctgaaaatt tcaggaaggc ctataaacaa gtgttcaagt gtcacattcg caaagattca cacctgagtg atactaaaga aaataaaagt cgaatagaca ccccaccatc aaccaattgt actcatgtgt gataaaagat agagtatcct tatggttgag tttccatata agtggaccag acacagaaac aaacagaatg agctagtaag cgatgctgca acttgttatc ttaacaagaa ttcaagtcgt tttaattaaa tcccacgtgt gttaaaaagt actttgatcc atttaggaaa ttcctaggtc tagtgagaat tatttttcaa ttttatttta gttctaaatt atgtttcaga aacaaaagac aatgctgtac agttttattc ctcttcagac atgaaaggga acatatatat tccatatata tgttcaactc ttcatagatt gtgaactggc ccatcaatat ggtcaggaat atttgcagtc tacattttaa agccaattta tttagaaaaa aaatttgagc tttaattctt taattttaag agaagtaata ttgtgaacta tgtattttaa aatatgatca tggacacaca atgatgaatt ttttggccat ttacatagac atatctatta agtggaaaga	Homo sapiens

				aggctttctg aagtctgttt gcacaggtgg catttgcttc caattgtagc tagcgcacag agctttggaa gcctgtcatt atgagataca gtcggtttac ctcaggagtc aattcagtgt tgtactggtg acctgggatg cagtagtagg cactgttgat tcaaatttat cctgtgaaac tggctttata gagttaacaa aacagagtca gagaccactg tcttaacagt ggaagatgca aataagtttt tgagaataaa actggatttt gaaattttac attagtactt gacaaaagtt ttcattttgc cttgaatgga acctactaaa aagagagatg aaaaaaaatc agcgaggttg atgtagataa taatttctat gggaccaaag actagacaga attcagtaag tcacatgaag taatggtcat gcctgtacat aaagcatatt tcatgtttga tttagatgac attcaaaaaa aatcatggga ctgaatatac ctggggtatc ctatcttgta caaatgcatg ctttttcatt aaatttgtaa tgatgtttaa tgaacatttc caccaaacat tatttcctct aaaaatgtta atttggggtt aaaaccatca ccatttgaat ttcaaatgta gttttcatga caattttata ttgatgtgtg tttacaatga gaaaatggca tgaaaatatt aaattgtctt gtatcg		
126	1762	Galanin Receptor GalR1	NP_001471.1	MELAVGNLSE GNASWPEPPA PEPGPLFGIG VENFVTLVVF GLIFALGVLG NSLVITVLAR SKPGKPRSTT NLFILNLSIA DLAYLLFCIP FQATVYALPT WVLGAFICKF IHYFFTVSML VSIFTLAAMS VDRYVAIVHS RRSSSLRVSR NALLGVGCIW ALSIAMASPV AYHQGLFHPR ASNQTFCWEQ WPDPRHKKAY VVCTFVFGYL LPLLLICFCY AKVLNHLHKK LKNMSKKSEA SKKKTAQTVL VVVVVFGISW LPHHIIHLWA EFGVFPLTPA SFLFRITAHC LAYSNSSVNP IIYAFLSENF RKAYKQVFKC HIRKDSHLSD TKENKSRIDT PPSTNCTHV	P	Homo sapiens
127	1808	Gastric Inhibitory Polypeptide Receptor	NM_000164	ggcagcggtg gcaggggctg caggagcaag tgaccaggag caggactggg gacaggcctg atcgcccctg cacgaaccag acccttcgcc gccctcacga tgactacctc tccgatcctg cagctgctgc tgcggctctc actgtgcggg ctgctgctcc agagggcgga gacaggctct aaggggcaga cggcggggga gctgtaccag cgctgggaac ggtaccgcag ggagtgccag gagaccttgg cagccgcgga accgccttca ggcctcgcct gtaacgggtc cttcgatatg tacgtctgct gggactatgc tgcacccaat gccactgccc gtgcgtcctg cccctggtac ctgccctggc accaccatgt ggctgcaggt ttcgtcctcc gccagtgtgg cagtgatggc caatggggac tttggagaga ccatacacaa tgtgagaacc cagagaagaa tgaggccttt ctggaccaaa ggctcatctt ggagcggttg caggtcatgt acactgtcgg ctactccctg tctctcgcca cactgctgct agccctgctc atcttgagtt tgttcaggcg gctacattgc actagaaact atatccacat caacctgttc acgtctttca tgctgcgagc tgcggccatt ctcagccgag accgtctgct acctcgacct ggcccctacc ttggggacca ggcccttgcg ctgtggaacc aggccctcgc tgcctgccgc acggcccaga tcgtgaccca gtactgcgtg ggtgccaact acacgtggct gctggtggag ggcgtctacc tgcacagtct cctggtgctc gtgggaggct ccgaggaggg ccacttccgc tactacctgc tcctcggctg gggggccccc gcgcttttcg tcattccctg ggtgatcgtc aggtacctgt acgagaacac gcagtgctgg gagcgcaacg aagtcaaggc catttggtgg attatacgga cccccatcct catgaccatc ttgattaatt tcctcatttt tatccgcatt cttggcattc tcctgtccaa gctgaggaca cggcaaatgc gctgccggga ttaccggctg aggctggctc gctccacgct gacgctggtg cccctgctgg gtgtccacga ggtggtgttt gctcccgtga cagaggaaca ggcccggggc gccctgcgct tcgccaagct cggctttgag atcttcctca gctccttcca gggcttcctg gtcagcgtcc tctactgctt catcaacaag gaggtgcagt cggagatccg ccgtggctgg caccactgcc gcctgcgccg cagcctgggc gaggagcaac gccagctccc ggagcgcgcc	A	Homo sapiens

				ttccgggccc tgccctccgg ctccggcccg ggcgaggtcc ccaccagccg cggcttgtcc tcggggaccc tcccagggcc tgggaatgag gccagccggg agttggaaag ttactgctag ggggcgggat ccccgtgtct gttcagttag catggattta ttgagtgcca actgcgtgcc aggcccagta cggaggacgc tggggaaatg gtgaaggaaa cagaaaaaag gtccctgccc ttctggagat gacaactgag tggggaaaac agaccgtgaa cacaaaacat caagttccac acacgctatg gaatggttat gaagggaagc gagaaggggg cctagggtgg tctgggaggc gtctccaagg aggtgacact taagccatcc ccgaaagagg tgaaagagat cactttgggg agagctggag aacaggattc taggcggaag cgatagcata ggcaaaggcc cttgggcagg aaggcgctca gccttggctg gagtagaatt aagtcagagc caacaggttg gggagagaca gagaagtggg caggggcacc caagttggga tttcatttca ggtgcattgg agattcttag gagtgtctct tgggggtaat attttatttt ttaaaaaatg aggat		
128	1808	Gastric Inhibitory Polypeptide Receptor	NP_000155.1	MTTSPILQLL LRLSLCGLLL QRAETGSKGQ TAGELYQRWE RYRRECQETL AAAEPPSGLA CNGSFDMYVC WDYAAPNATA RASCPWYLPW HHHVAAGFVL RQCGSDGQWG LWRDHTQCEN PEKNEAFLDQ RLILERLQVM YTVGYSLSLA TLLLALLILS LFRRLHCTRN YIHINLFTSF MLRAAAILSR DRLLPRPGPY LGDQALALWN QALAACRTAQ IVTQYCVGAN YTWLLVEGVY LHSLLVLVGG SEEGHFRYYL LLGWGAPALF VIPWVIVRYL YENTQCWERN EVKAIWWIIR TPILMTILIN FLIFIRILGI LLSKLRTRQM RCRDYRLRLA RSTLTLVPLL GVHEVVFAPV TEEQARGALR FAKLGFEIFL SSFQGFLVSV LYCFINKEVQ SEIRRGWHHC RLRRSLGEEQ RQLPERAFRA LPSGSGPGEV PTSRGLSSGT LPGPGNEASR ELESYC	P	Homo sapiens
129	1813	Gastrin-Releasing Peptide Receptor	NM_005314	ccagattcta aatatcagga aagacgctgt gggaaaatag caggccaaaa gttcttagta aactgcagcc agggagactc agactagaat ggaggtagaa agaactgatg cagagtgggt ttaattctaa gccttttttgt ggctaagttt tgttgttgtt aacttattga atttagagtt gtattgcact ggtcatgtga aagccagagc agcaccagtg tcaaaatagt gacagagagt tttgaatacc atagttagta tatatgtact cagagtattt ttattaaaga aggcaaagag cccggcatag atcttatctt catcttcact cggttgcaaa atcaatagtt aagaaatagc atctaaggga acttttaggt gggaaaaaaa atctagagat ggctctaaat gactgtttcc ttctgaactt ggaggtggac catttcatgc actgcaacat ctccagtcac agtgcggatc tccccgtgaa cgatgactgg tcccacccgg ggatcctcta tgtcatccct gcagtttatg gggttatcat tctgataggc ctcattggca acatcacttt gatcaagatc ttctgtacag tcaagtccat gcgaaacgtt ccaaacctgt tcatttccag tctggctttg ggagacctgc tcctcctaat aacgtgtgct ccagtggatg ccagcaggta cctggctgac agatggctat ttggcaggat tggctgcaaa ctgatcccct ttatacagct tacctctgtt ggggtgtctg tcttcacact cacggcgctc tcggcagaca gatacaaagc cattgtccgg ccaatggata tccaggcctc ccatgccctg atgaagatct gcctcaaagc cgcctttatc tggatcatct ccatgctgct ggccattcca gaggccgtgt tttctgacct ccatcccttc catgaggaaa gcaccaacca gaccttcatt agctgtgccc catacccaca ctctaatgag cttcacccca aaatccattc tatggcttcc tttctggtct tctacgtcat cccactgtcg atcatctctg tttactacta cttcattgct aaaaatctga tccagagtgc ttacaatctt cccgtggaag ggaatataca tgtcaagaag cagattgaat cccggaagcg acttgccaag acagtgctgg tgtttgtggg cctgttcgcc ttctgctggc tccccaatca tgtcatctac ctgtaccgct cctaccacta ctctgaggtg gacacctcca tgctccactt tgtcaccagc atctgtgccc	A	Homo sapiens

				gcctcctggc cttcaccaac tcctgcgtga acccctttgc cctctacctg ctgagcaaga gtttcaggaa acagttcaac actcagctgc tctgttgcca gcctggcctg atcatccggt ctcacagcac tggaaggagt acaacctgca tgacctccct caagagtacc aacccctccg tggccacctt tagcctcatc aatggaaaca tctgtcacga gcggtatgtc tagattgacc cttgattttg cccccctgagg gacggttttg ctttatggct agacaggaac ccttgcatcc attgttgtgt ctgtgccctc caaagagcct tcagaatgct cctgagtggt gtaggtgggg gtggggaggc ccaaatgatg gatcaccatt atattttgaa agaagc		
130	1813	Gastrin-Releasing Peptide Receptor	NP_005305.1	MALNDCFLLN LEVDHFMHCN ISSHSADLPV NDDWSHPGIL YVIPAVYGVI ILIGLIGNIT LIKIFCTVKS MRNVPNLFIS SLALGDLLLL ITCAPVDASR YLADRWLFGR IGCKLIPFIQ LTSVGVSVFT LTALSADRYK AIVRPMDIQA SHALMKICLK AAFIWIISML LAIPEAVFSD LHPFHEESTN QTFISCAPYP HSNELHPKIH SMASFLVFYV IPLSIISVYY YFIAKNLIQS AYNLPVEGNI HVKKQIESRK RLAKTVLVFV GLFAFCWLPN HVIYLYRSYH YSEVDTSMLH FVTSICARLL AFTNSCVNPF ALYLLSKSFR KQFNTQLLCC QPGLIIRSHS TGRSTTCMTS LKSTNPSVAT FSLINGNICH ERYV	P	Homo sapiens
131	1814	Cholecystokinin B Receptor	NM_000731	atggagctgc tcaagctgaa ccggagcgtg cagggaaccg gacccgggcc gggggcttcc ctgtgccgcc cggggcgcc tctcctcaac agcagcagtg tgggcaacct cagctgcgag ccccctcgca ttcgcggagc cgggacacga gaattggagc tggccattag aatcactctt tacgcagtga tcttcctgat gagcgttgga ggaaatatgc tcatcatcgt ggtcctggga ctgagccgcc gcctgaggac tgtcaccaat gccttcctcc tctcactggc agtcagcgac ctcctgctgg ctgtggcttg catgcccttc accctcctgc ccaatctcat gggcacattc atctttggca ccgtcatctg caaggcggtt tcctacctca tgggggtgtc tgtgagtgtg tccacgctaa gcctcgtggc catcgcactg gagcggtaca gcgccatctg ccgaccactg caggcacgag tgtggcagac gcgctcccac gcggctcgcg tgattgtagc cacgtggctg ctgtccggac tactcatggt gccctacccc gtgtacactg tcgtgcaacc agtggggcct cgtgtgctgc agtgcgtgca tcgctggccc agtgcgcggg tccgccagac ctggtccgta ctgctgcttc tgctcttgtt cttcatcccg ggtgtggtta tggccgtggc ctacgggctt atctctcgcg agctctactt agggcttcgc tttgacggcg acagtgacag cgacagccaa agcagggtcc gaaaccaagg cgggctgcca ggggctgttc accagaacgg gcgttgccgg cctgagactg gcgcggttgg cgaagacagc gatggctgct acgtgcaact tccacgttcc cggcctgccc tggagctgac ggcgctgacg gctccagggc cgggatccgg ctcccggccc acccaggcca agctgctggc taagaagcgc gtggtgcgaa tgttgctggt gatcgttgtg ctttttttc tgtgttggtt gccagtttat agtgccaaca cgtggcgcgc ctttgatggc ccgggtgcac accgagcact ctcgggtgct cctatctcct tcattcactt gctgagctac gcctcggcct gtgtcaaccc cctggtctac tgcttcatgc accgtcgctt tcgccaggcc tgcctggaaa cttgcgctcg ctgctgcccc cggcctccac gagctcgccc cagggctctt cccgatgagg accctcccac tccctccatt gcttcgctgt ccaggcttag ctacaccacc atcagcacac tgggccctgg ctgaggagta gaggggccgt gggggttgag gcagggcaaa tgacatgcac tgacccttcc agacatagaa aacacaaacc acaactgaca caggaaacca acacccaaag catggactaa ccccaacgac aggaaaaggt agcttacctg acacaagagg aataagaatg gagcagtaca tgggaaagga ggcatgcctc tgatatggga ctgagcctgg cccatagaaa catgacactg accttggaga gacacagcgt ccctagcagt gaactatttc	A	Homo sapiens

				tacacagtgg gaactctgac aagggctgac ctgcctctca cacacataga ttaatggcac tgattgtttt agagactatg gagcctggca caggactgac tctgggatgc tcctagtttg acctcacagt gacccttccc aatcagcact gaaaatacca tcaggcctaa tctcatacct ctgaccaaca ggctgttctg cactgaaaag gttcttcatc cctttccagt taaggaccgt ggccctgccc tctccttcct tcccaaactg ttcaagaaat aataaattgt ttggcttcct cctgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aggaattcc		
132	1814	Cholecystokinin B Receptor	NP_000722.1	MELLKLNRSV QGTGPGPGAS LCRPGAPLLN SSSVGNLSCE PPRIRGAGTR ELELAIRITL YAVIFLMSVG GNMLIIVVLG LSRRLRTVTN AFLLSLAVSD LLLAVACMPF TLLPNLMGTF IFGTVICKAV SYLMGVSVSV STLSLVAIAL ERYSAICRPL QARVWQTRSH AARVIVATWL LSGLLMVPYP VYTVVQPVGP RVLQCVHRWP SARVRQTWSV LLLLLLFFIP GVVMAVAYGL ISRELYLGLR FDGDSDSDSQ SRVRNQGGLP GAVHQNGRCR PETGAVGEDS DGCYVQLPRS RPALELTALT APGPGSGSRP TQAKLLAKKR VVRMLLVIVV LFFLCWLPVY SANTWRAFDG PGAHRALSGA PISFIHLLSY ASACVNPLVY CFMHRRFRQA CLETCARCCP RPPRARPRAL PDEDPPTPSI ASLSRLSYTT ISTLGPG	P	Homo sapiens
133	1834	Glucagon Receptor	NM_000160	ggatctggca gcgccgcgaa gacgagcggt caccggcgcc cgacccgagc gcgcccagag gacggcgggg agccaagccg acccccgagc agcgccgcgc gggccctgag gctcaaaggg gcagcttcag gggaggacac cccactggcc aggacgcccc aggctctgct gctctgccac tcagctgccc tcggaggagc gtacacacac accaggactg cattgcccca gtgtgcagcc cctgccagat gtgggaggca gctagctgcc cagaggcatg ccccccctgcc agccacagcg acccctgctg ctgttgctgc tgctgctggc ctgccagcca caggtcccct ccgctcaggt gatggacttc ctgtttgaga agtggaagct ctacggtgac cagtgtcacc acaacctgag cctgctgccc cctcccacgg agctggtgtg caacagaacc ttcgacaagt attcctgctg gccggacacc cccgccaata ccacggccaa catctcctgc ccctggtacc tgccttggca ccacaaagtg caacaccgct tcgtgttcaa gagatgcggg cccgacggtc agtgggtgcg tggaccccgg gggcagcctt ggcgtgatgc ctcccagtgc cagatggatg gcgaggagat tgaggtccag aaggaggtgg ccaagatgta cagcagcttc caggtgatgt acacagtggg ctacagcctg tccctggggg ccctgctcct cgccttggcc atcctggggg gcctcagcaa gctgcactgc acccgcaatg ccatccacgc gaatctgttt gcgtccttcg tgctgaaagc cagctccgtg ctggtcattg atgggctgct caggacccgc tacagccaga aaattggcga cgacctcagt gtcagcacct ggctcagtga tggagcggtg gctggctgcc gtgtggccgc ggtgttcatg caatatggca tcgtggccaa ctactgctgg ctgctggtgg agggcctgta cctgcacaac ctgctgggcc tggccaccct ccccgagagg agcttcttca gcctctacct gggcatcggc tggggtgccc ccatgctgtt cgtcgtcccc tgggcagtgg tcaagtgtct gttcgagaac gtccagtgct ggaccagcaa tgacaacatg ggcttctggt ggatcctgcg gttccccgtc ttcctggcca tcctgatcaa cttcttcatc ttcgtccgca tcgttcagct gctcgtggcc aagctgcggg cacggcagat gcaccacaca gactacaagt tccggctggc caagtccacg ctgaccctca tccctctgct gggcgtccac gaagtggtct ttgccttcgt gacggacgag cacgcccagg gcaccctgcg ctccgccaag ctcttcttcg acctcttcct cagctccttc cagggcctgc tggtggctgt cctctactgc ttcctcaaca aggaggtgca gtcggagctg cggcggcgtt ggcaccgctg gcgcctgggc aaagtgctat gggaggagcg gaacaccagc aaccacaggg cctcatcttc gcccggccac ggccctccca gcaaggagct	A	Homo sapiens

				gcagtttggg aggggtggtg gcagccagga ttcatctgcg gagaccccct tggctggtgg cctccctaga ttggctgaga gccccttctg aaccctgctg ggaccccagc tagggctgga ctctggcacc cagaggcgtc gctggacaac ccagaactgg acgcccagct gaggctgggg gcgggggagc caacagcagc ccccacctac cccccacccc cagtgtggct gtctgcgaga ttgggcctcc tctccctgca cctgccttgt ccctggtgca gaggtgagca gaggagtcca gggcgggagt gggggctgtg ccgtgaactg cgtgccagtg tccccacgta tgtcggcacg tcccatgtgc atggaaatgt cctccaacaa taaagagctc aagtggtcac cgtg		
134	1834	Glucagon Receptor	NP_000151.1	MPPCQPQRPL LLLLLLACQ PQVPSAQVMD FLFEKWKLYG DQCHHNLSLL PPPTELVCNR TFDKYSCWPD TPANTTANIS CPWYLPWHHK VQHRFVFKRC GPDGQWVRGP RGQPWRDASQ CQMDGEEIEV QKEVAKMYSS FQVMYTVGYS LSLGALLLAL AILGGLSKLH CTRNAIHANL FASFVLKASS VLVIDGLLRT RYSQKIGDDL SVSTWLSDGA VAGCRVAAVF MQYGIVANYC WLLVEGLYLH NLLGLATLPE RSFFSLYLGI GWGAPMLFVV PWAVVKCLFE NVQCWTSNDN MGFWWILRFP VFLAILINFF IFVRIVQLLV AKLRARQMHH TDYKFRLAKS TLTLIPLLGV HEVVFAFVTD EHAQGTLRSA KLFFDLFLSS FQGLLVAVLY CFLNKEVQSE LRRRWHRWRL GKVLWEERNT SNHRASSSPG HGPPSKELQF GRGGGSQDSS AETPLAGGLP RLAESPF	P	Homo sapiens
135	1925	Gonadotropin -Releasing Hormone Receptor	NM_000406	ttggttgctg gtccacttac aaacactttt catatttgta tgtctttcca atggttatcc tgttttgttc atttcaggca tatggccctg atcagattaa ctgacatgat gtatatgcaa agccttttga gttcttcaga aaaataaatt atcttattca agactgattg cttataagga acttattata gctaatatag taggcacaat tttttttgta attctcctag atgagtcaga acttagtttt gatgtaggta aaaattttat ggtcacaaat ctcaggtgtg agaaaatctc tttccttgat actctatata aatagaggat ataaatattt caagtctgga agtagtgaga gaagctggta attctggaca tatagtgaca gtcaaaaagg agctcaggta caggactggt ctaagctgct caagattcag gagacagcca gtacacagag aagctgagga aataatacag atatatctaa aacacttatc taaccttctg tggtaacaag ctcccttaaag gggctggatg atgttgtgtt cactttttat caccagcaaa ggctaagata atgtatatag taaatattta gtaaccattt attaaataaa taaatattta agacagaata aacaagtata ataaatgaac caataagaat gcaccatcta agtcaaaata gccactttta tccttaacat tgtacctgct ttggctgctg cagaagcaaa cttgttggca ttagacaaat caagctggtg atttaataaa ttccaatgta agtcttacca gtattgatga ataactatcc agcactcacc atgaaagtta aagaagcaac acagaaaaag ttcctaagtg gtcccaattt gaaatgatca gataacctat aaaagaacat attcatatta tactaacata aacacatata aatgcactta cagcagttac acagtattct cttcaataac tagtttcctt atgcattaat gtgtaataac agcaactaca atatttagat aattataaaa accaaggcaa taatttaaaa actgattaac cgttttactc taacttaagc atggattgga tcagtaagat tgattaataa atttgaatgc agtcagttgg attgattcta atttaaagtt ttaatttgtt gtagaataat tttaagtgaa tatatttgtc cagtgttcga gtgctcaaca gtgtgtttga aaaggaaaac aaagaatgtt ttgagaatgt gttaattcct taagacaatg gattttaatt ggatctgttg ttttcatttt tcttcattat cattatacat ctgtatgttg gacagaacac taacactaaa tagtttttag aaagtgtttt ttgaagttat ttaaatcata atatcatgac tgacttttga attcaaaatt aggctgtgac tatccttctt cacttaggaa gagtgttgtg aaagccagac catctgctga ggtgctacag ttacatgtgg ccctcagaat gcgtttggcc tgctctgttt tagcactctg ttggattacc	A	Homo sapiens

				aatacacaaa acaagttaac ctttgatctt tcacattaag tatctcaggg acaaaatttg acatacgtct aaacctgtga cgtttccatc taaagaaggc agaaataaaa catggacttt agattcggtt acaataaaat atcagatgca ccagagacac aaggcttgaa gctctgtcct gggaaaatat ggcaaacagt gcctctcctg aacagaatca aaatcactgt tcagccatca acaacagcat cccactgatg cagggcaacc tccccactct gaccttgtct ggaaagatcc gagtgacggt tactttcttc ctttttctgc tctctgcgac ctttaatgct tctttcttgt tgaaacttca gaagtggaca cagaagaaag agaaagggaa aaagctctca agaatgaagc tgctcttaaa acatctgacc ttagccaacc tgttggagac tctgattgtc atgccactgg atgggatgtg gaacattaca gtccaatggt atgctggaga gttactctgc aaagttctca gttatctaaa gcttttctcc atgtatgccc cagccttcat gatggtggtg atcagcctgg accgctccct ggctatcacg aggcccctag ctttgaaaag caacagcaaa gtcggacagt ccatggttgg cctggcctgg atcctcagta gtgtctttgc aggaccacag ttatacatct tcaggatgat tcatctagca gacagctctg gacagacaaa agttttctct caatgtgtaa cacactgcag tttttcacaa tggtggcatc aagcatttta taactttttc accttcagct gcctcttcat catccctctt ttcatcatgc tgatctgcaa tgcaaaaatc atcttcaccc tgacacgggt ccttcatcag gacccccacg aactacaact gaatcagtcc aagaacaata taccaagagc acggctgaag actctaaaaa tgacggttgc atttgccact tcatttactg tctgctggac tccctactat gtcctaggaa tttggtattg gtttgatcct gaaatgttaa acaggttgtc agacccagta aatcacttct tctttctctt tgccttttta aacccatgct ttgatccact tatctatgga tatttttctc tgtga		
136	1925	Gonadotropin -Releasing Hormone Receptor	NP_000397.1	MANSASPEQN QNHCSAINNS IPLMQGNLPT LTLSGKIRVT VTFFLFLLSA TFNASFLLKL QKWTQKKEKG KKLSRMKLLL KHLTLANLLE TLIVMPLDGM WNITVQWYAG ELLCKVLSYL KLFSMYAPAF MMVVISLDRS LAITRPLALK SNSKVGQSMV GLAWILSSVF AGPQLYIFRM IHLADSSGQT KVFSQCVTHC SFSQWWHQAF YNFFTFSCLF IIPLFIMLIC NAKIIFTLTR VLHQDPHELQ LNQSKNNIPR ARLKTLKMTV AFATSFTVCW TPYYVLGIWY WFDPEMLNRL SDPVNHFFFL FAFLNPCFDP LIYGYFSL	P	Homo sapiens
137	1945	Opsin, green-sensitive	NM_000513	atggcccagc agtggagcct ccaaaggctc gcaggccgcc atccgcagga cagctatgag gacagcaccc agtccagcat cttcacctac accaacagca actccaccag aggccccttc gaaggcccga attaccacat cgctcccaga tgggtgtacc acctcaccag tgtctggatg atctttgtgg tcattgcatc cgttttcaca aatgggcttg tgctggcggc caccatgaag ttcaagaagc tgcgccaccc gctgaactgg atcctggtga acctggcggt cgctgacctg gcagagaccg tcatcgccag cactatcagc gttgtgaacc aggtctatgg ctacttcgtg ctgggccacc ctatgtgtgt cctggagggc tacaccgtct ccctgtgtgg gatcacaggt ctctggtctc tggccatcat ttcctgggag agatggatgg tggtctgcaa gccctttggc aatgtgagat ttgatgccaa gctggccatc gtgggcattg ccttctcctg gatctgggct gctgtgtgga cagccccgcc catctttggt tggagcaggt actggcccca cggcctgaag acttcatgcg gcccagacgt gttcagcggc agctcgtacc ccggggtgca gtcttacatg attgtcctca tggtcacctg ctgcatcacc ccactcagca tcatcgtgct ctgctacctc caagtgtggc tggccatccg agcggtggca aagcagcaga aagagtctga atccacccag aaggcagaga aggaagtgac gcgcatggtg gtggtgatgg tcctggcatt ctgcttctgc tggggaccat acgccttctt cgcatgcttt gctgctgcca accctggcta cccctccac	A	Homo sapiens

				cctttgatgg ctgccctgcc ggccttcttt gccaaaagtg ccactatcta caaccccgtt atctatgtct ttatgaaccg gcagtttcga aactgcatct tgcagctttt cgggaagaag gttgacgatg gctctgaact ctccagcgcc tccaaaacgg aggtctcatc tgtgtcctcg gtatcgcctg catga		
138	1945	Opsin, green-sensitive	NP_000504.1	MAQQWSLQRL AGRHPQDSYE DSTQSSIFTY TNSNSTRGPF EGPNYHIAPR WVYHLTSVWM IFVVIASVFT NGLVLAATMK FKKLRHPLNW ILVNLAVADL AETVIASTIS VVNQVYGYFV LGHPMCVLEG YTVSLCGITG LWSLAIISWE RWMVVCKPFG NVRFDAKLAI VGIAFSWIWA AVWTAPPIFG WSRYWPHGLK TSCGPDVFSG SSYPGVQSYM IVLMVTCCIT PLSIIVLCYL QVWLAIRAVA KQQKESESTQ KAEKEVTRMV VVMVLAFCFC WGPYAFFACF AAANPGYPFH PLMAALPAFF AKSATIYNPV IYVFMNRQFR NCILQLFGKK VDDGSELSSA SKTEVSSVSS VSPA	P	Homo sapiens
139	1951	Growth Hormone Secretagogue Receptor	NM_004122	atgtggaacg cgacgcccag cgaagagccg gggttcaacc tcacactggc cgacctggac tgggatgctt cccccggcaa cgactcgctg ggcgacgagc tgctgcagct cttccccgcg ccgctgctgg cgggcgtcac agccacctgc gtggcactct tcgtggtggg tatcgctggc aacctgctca ccatgctggt ggtgtcgcgc ttccgcgagc tgcgcaccac caccaacctc tacctgtcca gcatggcctt ctccgatctg ctcatcttcc tctgcatgcc cctggacctc gttcgcctct ggcagtaccg gccctggaac ttcggcgacc tcctctgcaa actcttccaa ttcgtcagtg agagctgcac ctacgccacg gtgctcacca tcacagcgct gagcgtcgag cgctacttcg ccatctgctt cccactccgg gccaaggtgg tggtcaccaa ggggcgggtg aagctggtca tcttcgtcat ctgggccgtg gccttctgca gcgccgggcc catcttcgtg ctagtcgggg tggagcacga gaacggcacc gacccttggg acaccaacga gtgccgcccc accgagtttg cggtgcgctc tggactgctc acggtcatgg tgtgggtgtc cagcatcttc ttcttccttc ctgtcttctg tctcacggtc ctctacagtc tcatcggcag gaagctgtgg cggaggaggc gcggcgatgc tgtcgtgggt gcctcgctca gggaccagaa ccacaagcaa accgtgaaaa tgctgggtgg gtctcagcgc gcgctcaggc tttctctcgc gggtcctatc ctctccctgt gccttctccc ttctctctga	A	Homo sapiens
140	1951	Growth Hormone Secretagogue Receptor	NP_004113.1	MWNATPSEEP GFNLTLADLD WDASPGNDSL GDELLQLFPA PLLAGVTATC VALFVVGIAG NLLTMLVVSR FRELRTTTNL YLSSMAFSDL LIFLCMPLDL VRLWQYRPWN FGDLLCKLFQ FVSESCTYAT VLTITALSVE RYFAICFPLR AKVVVTKGRV KLVIFVIWAV AFCSAGPIFV LVGVEHENGT DPWDTNECRP TEFAVRSGLL TVMVWVSSIF FFLPVFCLTV LYSLIGRKLW RRRRGDAVVG ASLRDQNHKQ TVKMLGGSQR ALRLSLAGPI LSLCLLPSL	P	Homo sapiens
141	1954	Growth Hormone-Releasing Hormone Receptor	NM_000823	agcagccaag gcttactgag gctggtggag ggagccactg ctgggctcac catggaccgc cggatgtggg gggcccacgt cttctgcgtg ttgagcccgt taccgaccgt attgggccac atgcacccag aatgtgactt catcacccag ctgagagagg atgagagtgc ctgtctacaa gcagcagagg agatgcccaa caccaccctg ggctgccctg cgacctggga tgggctgctg tgctggccaa cggcaggctc tggcgagtgg gtcaccctcc cctgcccgga tttcttctct cacttcagct cagagtcagg ggctgtgaaa cgggattgta ctatcactgg ctggtctgag ccctttccac cttaccctgt ggcctgccct gtgcctctgg agctgctggc tgaggaggaa tcttacttct ccacagtgaa gattatctac accgtgggcc atagcatctc tattgtagcc ctcttcgtgg ccatcaccat cctggttgct ctcaggaggc tccactgccc ccggaactac gtccacaccc agctgttcac cacttttatc ctcaaggcgg gacgtgtgtt cctgaaggat	A	Homo sapiens

				gctgcccttt tccacagcga cgacactgac cactgcagct tctccactgt tctatgcaag gtctctgtgg ccgcctccca tttcgccacc atgaccaact tcagctggct gttggcagaa gccgtctacc tgaactgcct cctggcctcc acctccccca gctcaaggag agccttctgg tggctggttc tcgctggctg gggctgccc gtgctcttca ctggcacgtg ggtgagctgc aaactggcct tcgaggacat cgcgtgctgg gacctggacg acacctcccc ctactggtgg atcatcaaag ggcccattgt cctctcggtc ggggtgaact ttgggctttt tctcaatatt atccgcatcc tggtgaggaa actggagcca gctcagggca gcctccatac ccagtctcag tattggcgtc tctccaagtc gacacttttc ctgatcccac tctttggaat tcactacatc atcttcaact tcctgccaga caatgctggc ctgggcatcc gcctccccct ggagctggga ctgggttcct tccagggctt cattgttgcc atcctctact gcttcctcaa ccaagaggtg aggactgaga tctcacggaa gtggcatggc catgaccctg agcttctgcc agcctggagg acccgtgcta agtggaccac gccttcccgc tcggcggcaa aggtgctgac atctatgtgc taggctgcct catcacgcca ctggagtcca cacttgaatt tgggcagcta ccacgggtct gccatgctct ggaggagcaa gggggccaca tccccacccc agctgttacc cagcccgggg caggtgcagc ccttcctccc tgtctctgca tctgactctc ttttgaggtc cctgtatgtc tacctctgac ttctgtggtc cctctgtgtc tgctctcatc cattcctctt actggggcct ggggctctag cccaaggctc agaggagcca ataaacctgt aaatgaaaaa aaaaaaa		
142	1954	Growth Hormone-Releasing Hormone Receptor	NP_000814.1	MDRRMWGAHV FCVLSPLPTV LGHMHPECDF ITQLREDESA CLQAAEEMPN TTLGCPATWD GLLCWPTAGS GEWVTLPCPD FFSHFSSESG AVKRDCTITG WSEPFPPYPV ACPVPLELLA EEESYFSTVK IIYTVGHSIS IVALFVAITI LVALRRLHCP RNYVHTQLFT TFILKAGRVF LKDAALFHSD DTDHCSFSTV LCKVSVAASH FATMTNFSWL LAEAVYLNCL LASTSPSSRR AFWWLVLAGW GLPVLFTGTW VSCKLAFEDI ACWDLDDTSP YWWIIKGPIV LSVGVNFGLF LNIIRILVRK LEPAQGSLHT QSQYWRLSKS TLFLIPLFGI HYIIFNFLPD NAGLGIRLPL ELGLGSFQGF IVAILYCFLN QEVRTEISRK WHGHDPELLP AWRTRAKWTT PSRSAAKVLT SMC	P	Homo sapiens
143	2120	Histamine H1 Receptor	NM_000861	cagggagaca tacaggattt aagaagccca tcatggagaa gaccttcaat tacagagata aaaagttttt cttgtggaac aagttaacac tagatggcag ataacagact gaggagtgag ctgcttctga ctcgattaaa aagggagtga gccataactg gcggctgctc tttcgccaat gagcctcccc aattcctcct gcctcttaga agacaagatg tgtgagggca acaagaccac tatggccagc ccccagctga tgcccctggt ggtggtcctg agcactatct gcttggtcac agtagggctc aacctgctgg tgctgtatgc cgtacggagt gagcggaagc tccacactgt ggggaacctg tacatcgtca gcctctcggt ggcggacttg atcgtgggtg ccgtcgtcat gcctatgaac atcctctacc tgctcatgtc caagtggtca ctgggccgtc ctctctgcct cttttggctt tccatggact atgtggccag cacagcgtcc attttcagtg tcttcatcct gtgcattgat cgctaccgct ctgtccagca gcccctcagg taccttaagt atcgtaccaa gacccgagcc tcggccacca ttctgggggc ctggtttctc tcttttctgt gggttattcc cattctaggc tggaatcact tcatgcagca gacctcggtg cgccgagagg acaagtgtga gacagacttc tatgatgtca cctggttcaa ggtcatgact gccatcatca acttctacct gcccaccttg ctcatgctct ggttctatgc caagatctac aaggccgtac gacaacactg ccagcaccgg gagctcatca ataggtccct cccttccttc tcagaaatta agctgaggcc agagaacccc aagggggatg ccaagaaacc agggaaggag tctccctggg aggttctgaa	A	Homo sapiens

aaggaagcca aaagatgctg gtggtggatc tgtcttgaag tcaccatccc aaacccccaa
ggagatgaaa tccccagttg tcttcagcca agaggatgat agagaagtag acaaactcta
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144	2120	Histamine H1 Receptor	NP_000852.1	MSLPNSSCLL EDKMCEGNKT TMASPQLMPL VVVLSTICLV TVGLNLLVLY AVRSERKLHT VGNLYIVSLS VADLIVGAVV MPMNILYLLM SKWSLGRPLC LFWLSMDYVA STASIFSVFI LCIDRYRSVQ QPLRYLKYRT KTRASATILG AWFLSFLWVI PILGWNHFMQ QTSVRREDKC ETDFYDVTWF KVMTAIINFY LPTLLMLWFY AKIYKAVRQH CQHRELINRS LPSFSEIKLR PENPKGDAKK PGKESPWEVL KRKPKDAGGG SVLKSPSQTP KEMKSPVVFS QEDDREVDKL YCFPLDIVHM QAAAEGSSRD YVAVNRSHGQ LKTDEQGLNT HGASEISEDQ MLGDSQSFSR TDSDTTTETA PGKGKLRSGS NTGLDYIKFT WKRLRSHSRQ YVSGLHMNRE RKAAKQLGFI MAAFILCWIP YFIFFMVIAF CKNCCNEHLH MFTIWLGYIN STLNPLIYPL CNENFKKTFK RILHIRS	P	Homo sapiens
145	2121	Histamine H2 Receptor	NM_022304	ctcctgccct ccactgactc cagagaggga gatccccagt acttgactcc atcacgcaga tgggagcagg caccagctat ggagagggat acagctgcgt ctccacatga cccatcctgc atgacaccaa agccaccgcc agacagtgcc tcggattcta tgcaaaacct gggaagcgga gacctacccc agccccggga ggaagctagc tcttcagggg accgtctgag gactggagtt tgatccatga acctggcttc gaggccttgc ttttctctct tcttcattca tattcattcc caacacctta gaaggtgttg cttaatttat ttctagaaaa gcagcccaga gtcagtcatt gaagccttcc ccaccccctg gccaaaaaaa aaaaaaaaaa aaaactggac acattttgga tctgttggga gcttggagtc cagtggttgg catagttgtc acattgggag cagagaagaa gcaaccaggg gccctgatca ggggactgag ccgtagagtc ccaggatggc acccaatggc acagcctctt ccttttgcct ggactctacc gcatgcaaga tcaccatcac cgtggtcctt gcggtcctca tcctcatcac cgttgctggc aatgtggtcg tctgtctggc cgtgggcttg aaccgccggc tccgcaacct gaccaattgt ttcatcgtgt ccttggctat cactgacctg ctcctcggcc tcctggtgct gcccttctct gccatctacc agctgtcctg caagtggagc tttggcaagg tcttctgcaa tatctacacc agcctggatg tgatgctctg cacagcctcc attcttaacc tcttcatgat cagcctcgac cggtactgcg ctgtcatgga cccactgcgg taccctgtgc tggtcacccc agttcgggtc gccatctctc tggtcttaat ttgggtcatc tccattaccc tgtcctttct gtctatccac ctggggtgga acagcaggaa cgagaccagc aagggcaatc ataccacctc taagtgcaaa gtccaggtca atgaagtgta cgggctggtg gatgggctgg tcaccttcta cctcccgcta ctgatcatgt gcatcaccta ctaccgcatc ttcaaggtcg cccgggatca ggccaagagg atcaatcaca ttagctcctg gaaggcagcc accatcaggg agcacaaagc cacagtgaca ctggccgccg tcatgggggc cttcatcatc tgctggtttc cctacttcac cgcgtttgtg taccgtgggc tgagagggga tgatgccatc aatgaggtgt tagaagccat cgttctgtgg ctgggctatg ccaactcagc cctgaacccc atcctgtatg ctgcgctgaa cagagacttc cgcaccgggt accaacagct cttctgctgc	A	Homo sapiens

				aggctggcca accgcaactc ccacaaaact tctctgaggt ccaacgcctc tcagctgtcc aggacccaaa gccgagaacc caggcaacag gaagagaaac ccctgaagct ccaggtgtgg agtgggacag aagtcacggc cccccaggga gccacagaca ggtaatagcc ctagccattg gtgcacagga tgggggcaat gggaggggat gctactgatg ggaatgatta agggagctgc tgtttaggtg gtgctggttt atgttctagg aactcttcat gagcactttg taaacaccct cttgcttaat cctcccaacg gcccccaaag gtagaactta gctccctttt aaaaggagca cattaaaatt ctcagaggac ttggcaaggg ccgcacagct ggggcat		
146	2121	Histamine H2 Receptor	NP_071640.1	MAPNGTASSF CLDSTACKIT ITVVLAVLIL ITVAGNVVVC LAVGLNRRLR NLTNCFIVSL AITDLLLGLL VLPFSAIYQL SCKWSFGKVF CNIYTSLDVM LCTASILNLF MISLDRYCAV MDPLRYPVLV TPVRVAISLV LIWVISITLS FLSIHLGWNS RNETSKGNHT TSKCKVQVNE VYGLVDGLVT FYLPLLIMCI TYYRIFKVAR DQAKRINHIS SWKAATIREH KATVTLAAVM GAFIICWFPY FTAFVYRGLR GDDAINEVLE AIVLWLGYAN SALNPILYAA LNRDFRTGYQ QLFCCRLANR NSHKTSLRSN ASQLSRTQSR EPRQQEEKPL KLQVWSGTEV TAPQGATDR	P	Homo sapiens
147	2783	Opioid Receptor, kappa 1 (OPRK1)	NM_000912	tgcagcactc accatggaat ccccgattca gatcttccgc ggggagcctg gccctacctg cgccccgagc gcctgcctgc ccccaacag cagcgcctgg tttcccggct gggccgagcc cgacagcaac ggcagcgccg gctcggagga cgcgcagctg gagcccgcgc acatctcccc ggccatcccg gtcatcatca cggcggtcta ctccgtagtg ttcgtcgtgg gcttggtggg caactcgctg gtcatgttcg tgatcatccg atacacaaag atgaagacag caaccaacat ttacatattt aacctggctt tggcagatgc tttagttact acaaccatgc cctttcagag tacggtctac ttgatgaatt cctggccttt tggggatgtg ctgtgcaaga tagtaatttc cattgattac tacaacatgt tcaccagcat cttcaccttg accatgatga gcgtggaccg ctacattgcc gtgtgccacc ccgtgaaggc tttggacttc cgcacaccct tgaaggcaaa gatcatcaat atctgcatct ggctgctgtc gtcatctgtt ggcatctctg caatagtcct tggaggcacc aaagtcaggg aagacgtcga tgtcattgag tgctccttgc agttcccaga tgatgactac tcctggtggg acctcttcat gaagatctgc gtcttcatct ttgccttcgt gatccctgtc ctcatcatca tcgtctgcta caccctgatg atcctgcgtc tcaagagcgt ccggctcctt tctggctccc gagagaaaga tcgcaacctg cgtaggatca ccagactggt cctggtggtg gtggcggttt tcgtcgtctg ctggactccc attcacatat tcatcctggt ggaggctctg gggagcacct cccacagcac agctgctctc tccagctatt acttctgcat cgccttaggc tataccaaca gtagcctgaa tcccattctc tacgcctttc ttgatgaaaa cttcaagcgg tgtttccggg acttctgctt tccactgaag atgaggatgg agcggcagag cactagcaga gtccgaaata cagttcagga tcctgcttac ctgagggaca tcgatgggat gaataaacca gtatgactag tcgtggagat gtcttcgtac ag	A	Homo sapiens
148	2783	Opioid Receptor, kappa 1 (OPRK1)	NP_000903.1	MESPIQIFRG EPGPTCAPSA CLPPNSSAWF PGWAEPDSNG SAGSEDAQLE PAHISPAIPV IITAVYSVVF VVGLVGNSLV MFVIIRYTKM KTATNIYIFN LALADALVTT TMPFQSTVYL MNSWPFGDVL CKIVISIDYY NMFTSIFTLT MMSVDRYIAV CHPVKALDFR TPLKAKIINI CIWLLSSSVG ISAIVLGGTK VREDVDVIEC SLQFPDDDYS WWDLFMKICV FIFAFVIPVL IIIVCYTLMI LRLKSVRLLS GSREKDRNLR RITRLVLVVV AVFVVCWTPI HIFILVEALG STSHSTAALS SYYFCIALGY TNSSLNPILY AFLDENFKRC FRDFCFPLKM RMERQSTSRV RNTVQDPAYL RDIDGMNKPV	P	Homo sapiens
149	2964	Luteinizing	NM_000233	ggccgcccat gaagcagcgg ttctcggcgc tgcagctgct gaagctgctg ctgctgctgc	A	Homo

Hormone/Chor iogonadotrop in Receptor	agccgccgct gccacgagcg ctgcgcgagg cgctctgccc tgagccctgc aactgcgtgc ccgacggcgc cctgcgctgc cccggcccca cggccggtct cactcgacta tcacttgcct acctccctgt caaagtgatc ccatctcaag ctttcagagg acttaatgag gtcataaaaa ttgaaatctc tcagattgat tccctggaaa ggatagaagc taatgccttt gacaacctcc tcaatttgtc tgaaatactg atccagaaca ccaaaaatct gagatacatt gagcccggag catttataaa tcttcccgga ttaaaatact tgagcatctg taacacaggc atcagaaagt ttccagatgt tacgaaggtc ttctcctctg aatcaaattt cattctggaa atttgtgata acttacacat aaccaccata ccaggaaatg cttttcaagg gatgaataat gaatctgtaa cactcaaact atatggaaat ggatttgaag aagtacaaag tcatgcattc aatgggacga cactgacttc actggagcta aaggaaaacg tacatctgga gaagatgcac aatggagcct tccgtggggc cacagggccg aaaaccttgg atatttcttc caccaaattg caggccctgc cgagctatgg cctagagtcc attcagaggc taattgccac gtcatcctat tctctaaaaa aattgccatc aagagaaaca tttgtcaatc tcctggaggc cacgttgact taccccagcc actgctgtgc ttttagaaac ttgccaacaa aagaacagaa tttttcacat tccatttctg aaaacttttc caaacaatgt gaaagcacag taaggaaagt gagtaacaaa acactttatt cttccatgct tgctgagagt gaactgagtg gctgggacta tgaatatggt ttctgcttac ccaagacacc ccgatgtgct cctgaaccag atgcttttaa tccctgtgaa gacattatgg gctatgactt ccttagggtc ctgatttggc tgattaatat tctagccatc atgggaaaca tgactgttct ttttgttctc ctgacaagtc gttacaaact tacagtgcct cgttttctca tgtgcaatct ctcctttgca gacttttgca tggggctcta tctgctgctc atagcctcag ttgattccca aaccaagggc cagtactata accatgccat agactggcag acagggagtg ggtgcagcac tgctggcttt ttcactgtat tcgcaagtga actttctgtc tacaccctca ccgtcatcac tctagaaaga tggcacacca tcacctatgc tattcacctg gaccaaaagc tgcgattaag acatgccatt ctgattatgc ttggaggatg gctcttttct tctctaattg ctatgttgcc ccttgtcggt gtcagcaatt acatgaaggt cagtatttgc ttccccatgg atgtggaaac cactctctca caagtctata tattaaccat cctgattctc aatgtggtgg ccttcttcat aatttgtgct tgctacatta aaatttattt tgcagttcga aacccagaat taatggctac caataaagat acaaagattg ctaagaaaat ggcaatcctc atcttcaccg atttcacctg catggcacct atctcttttt ttgccatctc agctgccttc aaagtacctc ttatcacagt aaccaactct aaagttttac tggttctttt ttatcccatc aattcttgtg ccaatccatt tctgtatgca atattcacta agacattcca aagagatttc tttcttttgc tgagcaaatt tggctgctgt aaacgtcggg ctgaacttta tagaaggaaa gatttttcag cttacacctc caactgcaaa aatggcttca ctggatcaaa taagccttct caatccacct tgaagttgtc cacattgcac tgtcaaggta cagctctcct agacaagact cgctacacag agtgttaact gttacatcag taactgcatt attgaattgt tcttaaacct gtaaaaaaaa attacctgta ccagtaattt taacataaag ggttggattt aggaaattat ttatttttag gtacattagg caagagacct ctacctagta gaaagtgtag tctatgacca ctgccacacg taaaaactat ttgtcattgt tacatggcat aaatatgaag ttgagagtgt ttagaaattt ttatagaaat tttgacacag taattttgtt tgatgaatct tttaaaaaac agaggaggta ttttgcatat ctttttttca ttttcgtaat ttgtattgca ttctataaaa atattagttc ataacagatc agaaatttaa aataaggggc tttttcctca ggtagtttga aaaacacact	sapiens

				ctagagatgc actgttcaat tcggtacgca ctagccacat gtggctaaat taaaattaaa taaaatgaga aatgtagttt ctcagttgca ctacgtttca agttctcaat ggctacgtca agttctcaat ggctacgtgt gactagtgct taccatactg gacagcacag acacagaata ttttcatcac cacagaaagt tctatctgtt ctattataga gacttttatg tatgccctat ctggattcta cttatttata atttaaggta aacatctgaa agcacatttc agcctatttg cttagtgaaa cattaagctg tagactgtaa actcctcgtg agtaggaacc ctgtctcagt gcattttgtt ttcctgcttc ctacctcaag atcttggcaa tggtacacta caaatgtgct gagttagaat tactctgaag ttatgaaaca tataatgaaa acaattttc cggcc		
150	2964	Luteinizing Hormone/Chorionadotropin Receptor	NP_000224.1	MKQRFSALQL LKLLLLLQPP LPRALREALC PEPCNCVPDG ALRCPGPTAG LTRLSLAYLP VKVIPSQAFR GLNEVIKIEI SQIDSLERIE ANAFDNLLNL SEILIQNTKN LRYIEPGAFI NLPGLKYLSI CNTGIRKFPD VTKVFSSESN FILEICDNLH ITTIPGNAFQ GMNNESVTLK LYGNGFEEVQ SHAFNGTTLT SLELKENVHL EKMHNGAFRG ATGPKTLDIS STKLQALPSY GLESIQRLIA TSSYSLKKLP SRETFVNLLE ATLTYPSHCC AFRNLPTKEQ NFSHSISENF SKQCESTVRK VSNKTLYSSM LAESELSGWD YEYGFCLPKT PRCAPEPDAF NPCEDIMGYD FLRVLIWLIN ILAIMGNMTV LFVLLTSRYK LTVPRFLMCN LSFADFCMGL YLLLIASVDS QTKGQYYNHA IDWQTGSGCS TAGFFTVFAS ELSVYTLTVI TLERWHTITY AIHLDQKLRL RHAILIMLGG WLFSSLIAML PLVGVSNYMK VSICFPMDVE TTLSQVYILT ILILNVVAFF IICACYIKIY FAVRNPELMA TNKDTKIAKK MAILIFTDFT CMAPISFFAI SAAFKVPLIT VTNSKVLLVL FYPINSCANP FLYAIFTKTF QRDFFLLLSK FGCCKRRAEL YRRKDFSAYT SNCKNGFTGS NKPSQSTLKL STLHCQGTAL LDKTRYTEC	P	Homo sapiens
151	2976	Lysophosphatidic Acid Receptor Edg2	NM_001401	acggcgcgct gggctcacac tgtcccgccg cggacgggct ttgtggttgg gggcgcgcgt gcgagtgcca gtgagagtgt gggtgcgcgc tgtgggccgc ggcgcgggtg ggtggccgtg cgttcttgcg agccggcctg caggaggcga ggctcccctg gcctcccgca cccagcggcg gaccgagccc ctggagggaa gttgccgcag ccgcccgggc cgccggccct cctgtcccgc gccaggtaca cagcttctcc tagcatgact tcgatctgat cagcaaacaa gaaaatttgt ctcccgtagt tctggggcgt gttcaccacc tacaaccaca gagctgtcat ggctgccatc tctacttcca tccctgtaat ttcacagccc cagttcacag ccatgaatga accacagtgc ttctacaacg agtccattgc cttcttttat aaccgaagtg gaaagcatct tgccacagaa tggaacacag tcagcaagct ggtgatggga cttggaatca ctgtttgtat cttcatcatg ttggccaacc tattggtcat ggtggcaatc tatgtcaacc gccgcttcca ttttcctatt tattacctaa tggctaatct ggctgctgca gacttctttg ctgggttggc ctacttctat ctcatgttca acacaggacc caatactcgg agactgactg ttagcacatg gctcctgcgt cagggcctca ttgacaccag cctgacggca tctgtggcca acttactggc tattgcaatc gagaggcaca ttacggtttt ccgcatgcag ctccacacac ggatgagcaa ccggcgggta gtggtggtca ttgtggtcat ctggactatg gccatcgtta tgggtgctat acccagtgtg ggctggaact gtatctgtga tattgaaaat tgttccaaca tggcacccct ctacagtgac tcttacttag tcttctgggc cattttcaac ttggtgacct ttgtggtaat ggtggttctc tatgctcaca tctttggcta tgttcgccag aggactatga gaatgtctcg gcatagttct ggacccggc ggaatcggga taccatgatg agtcttctga agactgtggt cattgtgctt ggggccttta tcatctgctg gactcctgga ttggttttgt tacttctaga cgtgtgctgt ccacagtgcg acgtgctggc ctatgagaaa ttcttccttc tccttgctga attcaactct	A	Homo sapiens

				gccatgaacc ccatcattta ctcctaccgc gacaaagaaa tgagcgccac ctttaggcag atcctctgct gccagcgcag tgagaacccc accggcccca cagaaggctc agaccgctcg gcttcctccc tcaaccacac catcttggct ggagttcaca gcaatgacca ctctgtggtt tagaacggaa actgagatga ggaaccagcc gtcctctctt ggaggataaa cagcctcccc ctacccaatt gccagggcaa ggtggggtgt gagagaggag aaaagtcaac tcatgtactt aaacactaac caatgacagt atttgttcct ggaccccaca agacttgata tatattgaaa attagcttat gtgacaaccc tcatcttgat ccccatccct tctgaaagta ggaagttgga gctcttgcaa tggaattcaa gaacagactc tggagtgtcc atttagacta cactaactag acttttaaaa gattttgtgt ggtttggtgc aagtcagaat aaattctggc tagttgaatc cacaacttca tttatataca ggcttccctt ttttattttt aaaggatacg tttcacttaa taaacacgtt tatgcctatc agcatgtttg tgatggatga gactatggac tgcttttaaa ctaccataat tccatttttt cccttacata ggaaaactgt aagttggaat tatcttttgt ttagaaagca tgcatgtaat gtatgtatgc agtatgcctt acttaaaaag attaaaagga tactaatgtt aaatcttcta ggaaatagaa cctagacttc aaagccagta tttgtttagg tcatgaagca aacaatgctc taatcacaat attaactgtt taattaaaat gttgtaacaa gtataaaaca gggaatgtaa gtttattacc aaagtgatat gtattccaaa aaagtcatag aagatgaagc actataatat tgttcccata tatttaaaat acccaagtac attctaatta ccagtatatc agaggaaaat tttcgtagtc tttgtaaaat aatatactca tcatagaaaa cttgaaaaat gcagaaatgt ataaaaaagc aaaaatgatt actgataata tcacaaccca gaagtaacca cctttaaaaa gcaaccccca tgtatgccta tatgtgtatt gtatactttt tttacataat tggagtcata ctgtaaacag ttttataagt agatcttttt cattgcaaaa ttgccacatt ttcttatggc attaaaaatt ttacaaaaac ataattttaa tggctatatt atattccatt taatggatgc aactcagttt atttaaccat tcccatgttg ttaactattt aggttgtttc taattttcat tattataaag ttgcagaaat ttggtgt		
152	2976	Lysophosphatidic Acid Receptor Edg2	NP_001392.1	MAAISTSIPV ISQPQFTAMN EPQCFYNESI AFFYNRSGKH LATEWNTVSK LVMGLGITVC IFIMLANLLV MVAIYVNRRF HFPIYYLMAN LAAADFFAGL AYFYLMFNTG PNTRRLTVST WLLRQGLIDT SLTASVANLL AIAIERHITV FRMQLHTRMS NRRVVVVIVV IWTMAIVMGA IPSVGWNCIC DIENCSNMAP LYSDSYLVFW AIFNLVTFVV MVVLYAHIFG YVRQRTMRMS RHSSGPRRNR DTMMSLLKTV VIVLGAFIIC WTPGLVLLLL DVCCPQCDVL AYEKFFLLLA EFNSAMNPII YSYRDKEMSA TFRQILCCQR SENPTGPTES SDRSASSLNH TILAGVHSND HSVV	P	Homo sapiens
153	3038	G Protein-Coupled Receptor MRG	S78653	ttttgtattt gttgcaccct aagtctgttc atttccttct cctcagctga catttggagc atagcagtcg atgatgccca cacagacact gcctgagact cacgcccctg gagaaacgca gatttcctta ttttccaggt caagtcctgc cagccataga aaggacttct ttggtgccaa ctgctgtgaa atgcctgcct tggaaatctc agtgctccct tgtacctgtc tgagcccagg gaaatgccat actgtggcac tgctgcatcc tgtatggcta cccaaggatg cccaggactg gtttgaaaga gatgagacat ggccaggtgc gtggctcacg cttgtaatcc agcactttgg gaggtcaagg cagtggatca caaggtcaga gttgagacca gccaggccaa tatggtgaaa accccatctc tactaaaaat acaaaaaatt agccgggcaa tggtggtggg tgcctgtagt tccagctagt caggaggccg aggcaggaga atcgcttgaa cctggaaggt ggaggttcca gtgagctgag atcgcgccac tgcactccag cctgggtgac agagtgagac tccaactcaa	A	Homo sapiens

				aaaaaaaaaa aaaaaagaga tgagacacta gtgtctcatg agtagaacct ggaccagaca caaatctcca ttcccaatgt ttagtgcctc attagtgccc aacaacaaga tattgggtct atgtgggtag gcctggggca tcctgtacaa caggagatgt gttaggggag ggagaacaga tcacaaattc atggagagct atttgcagag cagatactcc catccactct gatatgtagt taatgttcag ctgttcctaa aaagcacacc caacaatggg tgttctattc cagcctagga aaatgtagag gcaaggggtc tgaggccaga ggacaccact agatggacca ctgctcctga ctgtgatgtt gtggcccact caggtcccag caccccatgg tctgggggaa aatttgctgg ttcagccaga gggctggatg gacagtgttt gctgagtcac agatatctct ctcatgtagc ctttgtctcc acagtggtga ccaggaggca cagaacccaa acctggtatc tcagctctgt ggcgtctttc ttcaaaatga gacgaatgaa accatacata tgcagatgag catggcagtg ggacagcagg ccctgccctt gaatatcatt gcccccaagg ctgtgctggt ctccctctgt ggggtcttat tgaatggcac tgtcttctgg ctgctttgct gtggggccac gaatccctac atggtataca tcctccacct ggtcgctgct gacgtgatct atctttgctg ctcggcagtg gggttcttac aggtgactct gctaacttat catggagtcg tgttttttat ccctgatttc ctggccatat tgtctccctt ctcctttgag gtgtgtctct gtctcctggt ggccatcagc acagagcggt gtgtgtgtgt cctcttcccc atctggtaca gatgccaccg cccaaaatac acatctaatg ttgtctgcac cctcatctgg ggcctgcctt tttgcatcaa catagtaaaa tcacttttcc taacttactg gaaacatgta aaggcatgtg tcatatttct aaagctttct gggctcttcc atgctatcct ttcacttgtg atgtgtgtgt cgagtctgac tctactcatt agattcctgt gctgctccca gcagcaaaag gccaccaggg tctatgcggt ggtgcagatc tcggcccccca tgttcctact ctgggcccta cccctgagcg tggcacccct cataacagat ttcaaaatgt ttgtcaccac ctcctattta atttccttgt tcctcattat aaacagcagc gccaacccta tcatttattt ctttgtgggg agcctcagaa agaaaaggct gaaggaatct ctcagagtga ttctccaacg ggcgttagca gataagccag aggtggggag gaacaaaaag gcagctggca tcgacccaat ggagcaacca cactctactc agcatgtgga gaaccttctt cccagggagc acagggtcga tgtggaaaca taatttccca catctgagct ggggaattgt acacatagta acccagcctg ttctgcatca taaggctgct gcatcaaatc aatgctttat tctaatcaag ttcagctttc atggactttc aaaacaaccc cttgctgttt gtggttggaa gagacattaa cttccttcct aggcagtaag cccagtttga atgtgctcca gttccaacga tgaggggaat gggacccagt gagactttcc tggtacctgt ggaatccaaa taaagaccat acaaaggcat gaattc		
154	3038	G Protein- Coupled Receptor MRG	AAB21255.1	MVWGKICWFS QRAGWTVFAE SQISLSCSLC LHSGDQEAQN PNLVSQLCGV FLQNETNETI HMQMSMAVGQ QALPLNIIAP KAVLVSLCGV LLNGTVFWLL CCGATNPYMV YILHLVAADV IYLCCSAVGF LQVTLLTYHG VVFFIPDFLA ILSPFSFEVC LCLLVAISTE RCVCVLFPIW YRCHRPKYTS NVVCTLIWGL PFCINIVKSL FLTYWKHVKA CVIFLKLSGL FHAILSLVMC VSSLTLLIRF LCCSQQQKAT RVYAVVQISA PMFLLWALPL SVAPLITDFK MFVTTSYLIS LFLIINSSAN PIIYFFVGSL RKKRLKESLR VILQRALADK PEVGRNKKAA GIDPMEQPHS TQHVENLLPR EHRVDVET	P	Homo sapiens
155	3057	Melanocortin 3 Receptor (MC3R)	NM_019888	atgagcatcc aaaagaagta tctggaggga gatttgtct ttcctgtgag cagcagcagc ttcctacgga ccctgctgga gccccagctc ggatcagccc ttctgacagc aatgaatgct tcgtgctgcc tgccctctgt tcagccaaca ctgcctaatg gctcggagca cctccaagcc	A	Homo sapiens

				cctttcttca gcaaccagag cagcagcgcc ttctgtgagc aggtcttcat caagcccgag atttcctgt ctctgggcat cgtcagtctg ctggaaaaca tcctggttat cctggccgtg gtcaggaacg gcaacctgca ctccccgatg tacttctttc tctgcagcct ggcggtggcc gacatgctgg taagtgtgtc caatgccctg gagaccatca tgatcgccat cgtccacagc gactacctga ccttcgagga ccagtttatc cagcacatgg acaacatctt cgactccatg atctgcatct ccctggtggc ctccatctgc aacctcctgg ccatcgccgt cgacaggtac gtcaccatct tttacgcgct ccgctaccac agcatcatga ccgtgaggaa ggccctcacc ttgatcgtgg ccatctgggt ctgctgcggc gtctgtggcg tggtgttcat cgtctactcg gagagcaaaa tggtcattgt gtgcctcatc accatgttct tcgccatgat gctcctcatg ggcaccctct acgtgcacat gttcctcttt gcgcggctgc acgtcaagcg catagcagca ctgccacctg ccgacggggt ggccccacag caacactcat gcatgaaggg ggcagtcacc atcaccattc tcctgggcgt gttcatcttc tgctgggccc ccttcttcct ccacctggtc ctcatcatca cctgccccac caacccctac tgcatctgct acactgccca cttcaacacc tacctggtcc tcatcatgtg caactccgtc atcgacccac tcatctacgc tttccggagc ctggaattgc gcaacacctt tagggagatt ctctgtggct gcaacggcat gaacttggga tag		
156	3057	Melanocortin 3 Receptor (MC3R)	NP_063941.1	MSIQKKYLEG DFVFPVSSSS FLRTLLEPQL GSALLTAMNA SCCLPSVQPT LPNGSEHLQA PFFSNQSSSA FCEQVFIKPE IFLSLGIVSL LENILVILAV VRNGNLHSPM YFFLCSLAVA DMLVSVSNAL ETIMIAIVHS DYLTFEDQFI QHMDNIFDSM ICISLVASIC NLLAIAVDRY VTIFYALRYH SIMTVRKALT LIVAIWVCCG VCGVVFIVYS ESKMVIVCLI TMFFAMMLLM GTLYVHMFLF ARLHVKRIAA LPPADGVAPQ QHSCMKGAVT ITILLGVFIF CWAPFFLHLV LIITCPTNPY CICYTAHFNT YLVLIMCNSV IDPLIYAFRS LELRNTFREI LCGCNGMNLG	P	Homo sapiens
157	3058	Melanocortin 4 Receptor (MC4R)	NM_005912	atggtgaact ccacccaccg tgggatgcac acttctctgc acctctggaa ccgcagcagt tacagactgc acagcaatgc cagtgagtcc cttggaaaag gctactctga tggagggtgc tacgagcaac tttttgtctc tcctgaggtg tttgtgactc tgggtgtcat cagcttgttg gagaatatct tagtgattgt ggcaatagcc aagaacaaga atctgcattc acccatgtac tttttcatct gcagcttggc tgtggctgat atgctggtga gcgtttcaaa tggatcagaa accattatca tcaccctatt aaacagtaca gatacggatg cacagagttt cacagtgaat attgataatg tcattgactc ggtgatctgt agctccttgc ttgcatccat ttgcagcctg ctttcaattg cagtggacag gtactttact atcttctatg ctctccagta ccataacatt atgacagtta agcgggttgg gatcatcata agttgtatct gggcagcttg cacggtttca ggcattttgt tcatcattta ctcagatagt agtgctgtca tcatctgcct catcaccatg ttcttcacca tgctggctct catggcttct ctctatgtcc acatgttcct gatggccagg cttcacatta agaggattgc tgtcctcccc ggcactggtg ccatccgcca aggtgccaat atgaagggag cgattacctt gaccatcctg attggcgtct ttgttgtctg ctgggcccca ttcttcctcc acttaatatt ctacatctct tgtcctcaga atccatattg tgtgtgcttc atgtctcact ttaacttgta tctcatactg atcatgtgta attcaatcat cgatcctctg atttatgcac tccggagtca agaactgagg aaaaccttca aagagatcat ctgttgctat cccctgggag gcctttgtga cttgtctagc agatattaa	A	Homo sapiens
158	3058	Melanocortin 4 Receptor	NP_005903.1	MVNSTHRGMH TSLHLWNRSS YRLHSNASES LGKGYSDGGC YEQLFVSPEV FVTLGVISLL ENILVIVAIA KNKNLHSPMY FFICSLAVAD MLVSVSNGSE TIIITLLNST DTDAQSFTVN	P	Homo sapiens

		(MC4R)		IDNVIDSVIC SSLLASICSL LSIAVDRYFT IFYALQYHNI MTVKRVGIII SCIWAACTVS GILFIIYSDS SAVIICLITM FFTMLALMAS LYVHMFLMAR LHIKRIAVLP GTGAIRQGAN MKGAITLTIL IGVFVVCWAP FFLHLIFYIS CPQNPYCVCF MSHFNLYLIL IMCNSIIDPL IYALRSQELR KTFKEIICCY PLGGLCDLSS RY		
159	3059	Melanocortin 5 Receptor (MC5R)	NM_005913	atgaattcct catttcacct gcatttcttg gatctcaacc tgaatgccac agagggcaac ctttcaggac ccaatgtcaa aaacaagtct tcaccatgtg aagacatggg cattgctgtg gaggtgtttc tcactctggg tgtcatcagc ctcttggaga acatcttggt catagggggcc atagtgaaga acaaaaacct gcactccccc atgtacttct tcgtgtgcag cctggcagtg gcggacatgc tggtgagcat gtccagtgcc tgggagacca tcaccatcta cctactcaac aacaagcacc tagtgatagc agacgccttt gtgcgccaca ttgacaatgt gtttgactcc atgatctgca tttccgtggt ggcatccatg tgcagcttac tggccattgc agtggatagg tacgtcacca tcttctacgc cctgcgctac caccacatca tgacggcgag gcgctcaggg gccatcatcg ccggcatctg ggctttctgc acgggctgcg gcattgtctt catcctgtac tcagaatcca cctacgtcat cctgtgcctc atctccatgt tcttcgctat gctgttcctc ctggtgtctc tgtacataca catgttcctc ctggcgcgga ctcacgtcaa gcggatcgcg gctctgcccg gggccagctc tgcgcggcag aggaccagca tgcagggcgc ggtcaccgtc accatgctgc tgggcgtgtt taccgtgtgc tgggccccgt tcttccttca tctcacttta atgctttctt gccctcagaa cctctactgc tctcgcttca tgtctcactt caatatgtac ctcatactca tcatgtgtaa ttccgtgatg gaccctctca tatatgcctt ccgcagccaa gagatgcgga agacctttaa ggagattatt tgctgccgtg gtttcaggat cgcctgcagc tttcccagaa gggattaa	A	Homo sapiens
160	3059	Melanocortin 5 Receptor (MC5R)	NP_005904.1	MNSSFHLHFL DLNLNATEGN LSGPNVKNKS SPCEDMGIAV EVFLTLGVIS LLENILVIGA IVKNKNLHSP MYFFVCSLAV ADMLVSMSSA WETITIYLLN NKHLVIADAF VRHIDNVFDS MICISVVASM CSLLAIAVDR YVTIFYALRY HHIMTARRSG AIIAGIWAFC TGCGIVFILY SESTYVILCL ISMFFAMLFL LVSLYIHMFL LARTHVKRIA ALPGASSARQ RTSMQGAVTV TMLLGVFTVC WAPFFLHLTL MLSCPQNLYC SRFMSHFNMY LILIMCNSVM DPLIYAFRSQ EMRKTFKEII CCRGFRIACS FPRRD	P	Homo sapiens
161	3061	Melanocortin 1 Receptor (MC1R)	NM_002386	ggagagggtg tgagggcaga tctgggggtg cccagatgga aggaggcagg catgggggac acccaaggcc ccctggcagc accatgaact aagcaggaca cctggagggg aagaactgtg gggacctgga ggcctccaac gactccttcc tgcttcctgg acaggactat ggctgtgcag ggatcccaga gaagacttct gggctccctc aactccaccc ccacagccat cccccagctg gggctggctg ccaaccagac aggagcccgg tgcctggagg tgtccatctc tgacgggctc ttcctcagcc tggggctggt gagcttggtg gagaacgcgc tggtggtggc caccatcgcc aagaaccgga acctgcactc acccatgtac tgcttcatct gctgcctggc cttgtcggac ctgctggtga gcgggagcaa cgtgctggag acggccgtca tcctcctgct ggaggccggt gcactggtgg cccgggctgc ggtgctgcag cagctggaca atgtcattga cgtgatcacc tgcagctcca tgctgtccag cctctgcttc ctgggcgcca tcgccgtgga ccgctacatc tccatcttct acgcactgcg ctaccacagc atcgtgaccc tgccgcgggc gcggcaagcc gttgcggcca tctgggtggc cagtgtcgtc ttcagcacgc tcttcatcgc ctactacgac cacgtggccg tcctgctgtg cctcgtggtc ttcttcctgg ctatgctggt gctcatggcc gtgctgtacg tccacatgct ggcccgggcc tgccagcacg cccagggcat cgcccggctc	A	Homo sapiens

				cacaagaggc agcgcccggt ccaccagggc tttggcctta aaggcgctgt caccctcacc atcctgctgg gcattttctt cctctgctgg ggccccttct tcctgcatct cacactcatc gtcctctgcc ccgagcaccc cacgtgcggc tgcatcttca agaacttcaa cctctttctc gccctcatca tctgcaatgc catcatcgac cccctcatct acgccttcca cagccaggag ctccgcagga cgctcaagga ggtgctgaca tgctcctggt gagcgcggtg cacgcgcttt aagtgtgctg ggcagaggga ggtggtgata ttgtgtggtc tggttcctgt gtgaccctgg gcagttcctt acctccctgg tccccgtttg tcaaagagga tggactaaat gatctctgaa agtgttgaag		
162	3061	Melanocortin 1 Receptor (MC1R)	NP_002377.2	MAVQGSQRRL LGSLNSTPTA IPQLGLAANQ TGARCLEVSI SDGLFLSLGL VSLVENALVV ATIAKNRNLH SPMYCFICCL ALSDLLVSGS NVLETAVILL LEAGALVARA AVLQQLDNVI DVITCSSMLS SLCFLGAIAV DRYISIFYAL RYHSIVTLPR ARQAVAAIWV ASVVFSTLFI AYYDHVAVLL CLVVFFLAML VLMAVLYVHM LARACQHAQG IARLHKRQRP VHQGFGLKGA VTLTILLGIF FLCWGPFFLH LTLIVLCPEH PTCGCIFKNF NLFLALIICN AIIDPLIYAF HSQELRRTLK EVLTCSW	P	Homo sapiens
163	3079	Melatonin Receptor type 1a	NM_005958	ccggcggagc cttaacaagt ggtcgggcgg gcggacgagg cgggcgatgg ccctgcggcc gggacgcgaa cagggaccat gcagggcaac ggcagcgcgc tgcccaacgc ctcccagccc gtgctccgcg gggacggcgc gcggccctcg tggctggcgt ccgccctagc ctgcgtcctc atcttcacca tcgtggtgga catcctgggc aacctcctgg tcatcctgtc ggtgtatcgg aacaagaagc tcaggaacgc aggaaacatc tttgtggtga gcttagcggt ggcagacctg gtggtggcca tttatccgta cccgttggtg ctgatgtcga tatttaacaa cgggtggaac ctgggctatc tgcactgcca agtcagtggg ttcctgatgg gcctgagcgt catcggctcc atattcaaca tcaccggcat cgccatcaac cgctactgct acatctgcca cagtctcaag tacgacaaac tgtacagcag caagaactcc ctctgctacg tgctcctcat atggctcctg acgctggcgg ccgtcctgcc caacctccgt gcagggactc tccagtacga cccgaggatc tactcgtgca ccttcgccca gtccgtcagc tccgcctaca ccatcgccgt ggtggttttc cacttcctcg tccccatgat catagtcatc ttctgttacc tgagaatatg gatcctggtt ctccaggtca gacagagggt gaaacctgac cgcaaaccca aactgaaacc acaggacttc aggaattttg tcaccatgtt tgtggttttt gtcctctttg ccatttgctg ggctcctctg aacttcattg gcctggccgt ggcctctgac cccgccagca tggtgcctag gatcccagag tggctgtttg tggccagtta ctacatggcg tatttcaaca gctgcctcaa tgccattata tacgggctac tgaaccaaaa tttcaggaag gaatacagga gaattatagt ctcgctctgt acagccaggg tgttctttgt ggacagctct aacgacgtgg ccgatagggt taaatggaaa ccgtctccac tgatgaccaa caataatgta gtaaaggtgg actccgttta aaaaagcacc acgttccggg tgagatggac acgctgcgca aggcctcgct cttgacagat gtctgggaaa gcagagtggt ggaggaaact tccaactttt acctggctgc tgccatagtt tctgagctaa cgtgctgtca gcattataaa cccctccaat ctactagtca agagaagtac agaatgtatg gagagttaca tgttaactga ggaatgcggt tcagggctgg ggtgagagta agctgctgaa tgcattcagg ggaaggagtg tgcaaacttt tattgtaaat gagtgccaca aaaggggtaa ttgcattctt cttcactttt tgaagacttc tagcagaaaa atgaaagaga atttattta taaatgagca aatggaacaa ttttttttct gtaaatggaa caaacaatga aagtggggtg agtgcctctt attacagagg gaaaggctga acataaatca gttaatggct catcaacaat	A	Homo sapiens

				cacaaccaca accaacacca caaacctttc agctggcaga gttagcattg ggtagctata ctcatggtca taaatgtttg ccgctctata ttacaagttg tgcatgcaac cagataaaga actaaatcat aggccgggca cagtcgctca cacctgtaat ctcagcactt tgggaggctg aggtgggcag atcaactgag ttcaggagtt tgagaccacc ctggggcaac atgatgaaat cccatctcta aaaaaataca aaaaattatc tgggcatggt gcacacgcct gtaatcccag ctactcagga gactgagtta ggagaatccc ttgagcccca gaggcagagg ttgtggtgag ccgagatcgc gccagtacat tccaacttag gctacagaat gagactctgc ccaaaaaaaa aaaaaaaaa		
164	3079	Melatonin Receptor type 1a	NP_005949.1	MQGNGSALPN ASQPVLRGDG ARPSWLASAL ACVLIFTIVV DILGNLLVIL SVYRNKKLRN AGNIFVVSLA VADLVVAIYP YPLVLMSIFN NGWNLGYLHC QVSGFLMGLS VIGSIFNITG IAINRYCYIC HSLKYDKLYS SKNSLCYVLL IWLLTLAAVL PNLRAGTLQY DPRIYSCTFA QSVSSAYTIA VVVFHFLVPM IIVIFCYLRI WILVLQVRQR VKPDRKPKLK PQDFRNFVTM FVVFVLFAIC WAPLNFIGLA VASDPASMVP RIPEWLFVAS YYMAYFNSCL NAIIYGLLNQ NFRKEYRRII VSLCTARVFF VDSSNDVADR VKWKPSPLMT NNNVVKVDSV	P	Homo sapiens
165	3080	Melatonin Receptor type 1b	NM_005959	acgcgagctg ggcagggaag agagcgcccg gctcagtact gcgcgcgccc tgcggctgtc cggggccgcg cggtggccaa agcacagcgc gggagagtct gcgatgtcag agaacggctc cttcgccaac tgctgcgagg cgggcgggtg ggcagtgcgc ccgggctggt cgggggctgg cagcgcgcgg ccctccagga cccctcgacc tccctgggtg gctccagcgc tgtccgcggt gctcatcgtc accaccgccg tggacgtcgt gggcaacctc ctggtgatcc tctccgtgct caggaaccgc aagctccgga acgcaggtaa tttgttcttg gtgagtctgg cattggctga cctggtggtg gccttctacc cctacccgct aatcctcgtg gccatcttct atgacggctg ggccctgggg gaggagcact gcaaggccag cgcctttgtg atgggcctga gcgtcatcgg ctctgtcttc aatatcactg ccatcgccat taaccgctac tgctacatct gccacagcat ggcctaccac cgaatctacc ggcgctggca cacccctctg cacatctgcc tcatctggct cctcaccgtg gtggccttgc tgcccaactt ctttgtgggg tccctggagt acgacccacg catctattcc tgcaccttca tccagaccgc cagcacccag tacacggcgg cagtggtggt catccacttc ctcctcccta tcgctgtcgt gtccttctgc tacctgcgca tctgggtgct ggtgcttcag gcccgcagga aagccaagcc agagagcagg ctgtgcctga agcccagcga cttgcggagc tttctaacca tgtttgtggt gtttgtgatc tttgccatct gctgggctcc acttaactgc atcggcctcg ctgtggccat caacccccaa gaaatggctc cccagatccc tgaggggcta tttgtcacta gctacttact ggcttatttc aacagctgcc tgaatgccat tgtctatggg ctcttgaacc aaaacttccg cagggaatac aagaggatcc tcttggccct ttggaaccca cggcactgca ttcaagatgc ttccaagggc agccacgcgg aggggctgca gagcccagct ccacccatca ttggtgtgca gcaccaggca gatgctctct agcctggatc tgaggcacac cagcagcatg acaaactcat gaaatggtgg gagagagtct gctgcaaggg tgagaccagg cagcctgctg ggccacactg tcctgttggc atcacagccc caaggctggg ggaacttcat gctgggacaa gcagcccatc aacgccatgg gttcaggctg atccaggaga tgctcacagg ccacaggacc tggaaaacac tcttggtggt gtcttgggga tttggtgcac acaagaccaa ggaaaggaca gaatgaggaa aggcctgggg cagaagagcc caactccttc tcatagctga ccctcatcct cctgccttgg cctcctggct gctttctccc cttcccccca gcatggcagg atctcttcct gttagcaagg atgaaagaga gaggtcagta ggactggaac	A	Homo sapiens

				ttggtaacta caagggcctc aggtggggca ggtgcagagg gc		
166	3080	Melatonin Receptor type 1b	NP_005950.1	MSENGSFANC CEAGGWAVRP GWSGAGSARP SRTPRPPWVA PALSAVLIVT TAVDVVGNLL VILSVLRNRK LRNAGNLFLV SLALADLVVA FYPYPLILVA IFYDGWALGE EHCKASAFVM GLSVIGSVFN ITAIAINRYC YICHSMAYHR IYRRWHTPLH ICLIWLLTVV ALLPNFFVGS LEYDPRIYSC TFIQTASTQY TAAVVVIHFL LPIAVVSFCY LRIWVLVLQA RRKAKPESRL CLKPSDLRSF LTMFVVFVIF AICWAPLNCI GLAVAINPQE MAPQIPEGLF VTSYLLAYFN SCLNAIVYGL LNQNFRREYK RILLALWNPR HCIQDASKGS HAEGLQSPAP PIIGVQHQAD AL	P	Homo sapiens
167	3081	Melatonin-Related Receptor	NM_004224	tgtttgctgt ctggacctgg ctgctgatcc tgagcctgct gggagatctt aacgatcccc aggagcaaca tggggcccac cctagcggtt cccacccccт atggctgtat tggctgtaag ctaccccagc cagaataccc accggctcta atcatcttta tgttctgcgc gatggttatc accatcgttg tagacctaat cggcaactcc atggtcattt tggctgtgac gaagaacaag aagctccgga attctggcaa catcttcgtg gtcagtctct ctgtggccga tatgctggtg gccatctacc catacccttt gatgctgcat gccatgtcca ttgggggctg ggatctgagc cagttacagt gccagatggt cgggttcatc acagggctga gtgtggtcgg ctccatcttc aacatcgtgg caatcgctat caaccgttac tgctacatct gccacagcct ccagtacgaa cggatcttca gtgtgcgcaa tacctgcatc tacctggtca tcacctggat catgaccgtc ctggctgtcc tgcccaacat gtacattggc accatcgagt acgatcctcg cacctacacc tgcatcttca actatctgaa caaccctgtc ttcactgtta ccatcgtctg catccacttc gtcctccctc tcctcatcgt gggtttctgc tacgtgagga tctggaccaa agtgctggcg gcccgtgacc ctgcagggca gaatcctgac aaccaacttg ctgaggttcg caattttcta accatgtttg tgatcttcct cctctttgca gtgtgctggt gccctatcaa cgtgctcact gtcttggtgg ctgtcagtcc gaaggagatg gcaggcaaga tccccaactg gctttatctt gcagcctact tcatagccta cttcaacagc tgcctcaacg ctgtgatcta cggcctcctc aatgagaatt tccgaagaga atactggacc atcttccatg ctatgcggca ccctatcata ttcttccctg gcctcatcag tgatattcgt gagatgcagg aggcccgtac cctggcccgc gcccgtgccc atgctcgcga ccaagctcgt gaacaagacc gtgcccatgc ctgtcctgct gtggaggaaa ccccgatgaa tgtccggaat gttccattac ctggtgatgc tgcagctggc caccccgacc gtgcctctgg ccaccctaag ccccattcca gatcctcctc tgcctatcgc aaatctgcct ctacccacca caagtctgtc tttagccact ccaaggctgc ctctggtcac ctcaagcctg tctctggcca ctccaagcct gcctctggtc accccaagtc tgccactgtc taccctaagc ctgcctctgt ccatttcaag ggtgactctg tccatttcaa gggtgactct gtccatttca agcctgactc tgttcatttc aagcctgctt ccagcaaccc caagcccatc actggccacc atgtctctgc tggcagccac tccaagtctg ccttcagtgc tgccaccagc caccctaaac ccatcaagcc agctaccagc catgctgagc ccaccactgc tgactatccc aagcctgcca ctaccagcca ccctaagccc gctgctgctg acaaccctga gctctctgcc tcccattgcc ccgagatccc tgccattgcc caccctgtgt ctgacgacag tgacctccct gagtcggcct ctagccctgc cgctgggccc accaagcctg ctgccagcca gctggagtct gacaccatcg ctgaccttcc tgaccctact gtagtcacta ccagtaccaa tgattaccat gatgtcgtgg ttgttgatgt tgaagatgat cctgatgaaa tggctgtgtg aaaaatgctc tcgtaggtgg ccaggcagt	A	Homo sapiens

168	3081	Melatonin-Related Receptor	NP_004215.1	MGPTLAVPTP YGCIGCKLPQ PEYPPALIIF MFCAMVITIV VDLIGNSMVI LAVTKNKKLR NSGNIFVVSL SVADMLVAIY PYPLMLHAMS IGGWDLSQLQ CQMVGFITGL SVVGSIFNIV AIAINRYCYI CHSLQYERIF SVRNTCIYLV ITWIMTVLAV LPNMYIGTIE YDPRTYTCIF NYLNNPVFTV TIVCIHFVLP LLIVGFCYVR IWTKVLAARD PAGQNPDNQL AEVRNFLTMF VIFLLFAVCW CPINVLTVLV AVSPKEMAGK IPNWLYLAAY FIAYFNSCLN AVIYGLLNEN FRREYWTIFH AMRHPIIFFP GLISDIREMQ EARTLARARA HARDQAREQD RAHACPAVEE TPMNVRNVPL PGDAAAGHPD RASGHPKPHS RSSSAYRKSA STHHKSVFSH SKAASGHLKP VSGHSKPASG HPKSATVYPK PASVHFKGDS VHFKGDSVHF KPDSVHFKPA SSNPKPITGH HVSAGSHSKS AFSAATSHPK PIKPATSHAE PTTADYPKPA TTSHPKPAAA DNPELSASHC PEIPAIAHPV SDDSDLPESA SSPAAGPTKP AASQLESDTI ADLPDPTVVT TSTNDYHDVV VVDVEDDPDE MAV	P	Homo sapiens
169	3093	Metabotropic Glutamate Receptor 1	NM_000838	gaattccctt acaaacgcct ccagcttgta gaggcggtcg tggaggaccc agaggaggag acgaagggga aggaggcggt ggtggaggag gcaaaggcct tggacgacca ttgttggcga ggggcaccac tccgggagag gcggcgctgg gcgtcttggg ggtgcgcgcc gggagcctgc agcgggacca gcgtgggaac gcggctggca ggctgtggac ctcgtcctca ccaccatggt cgggctcctt ttgttttttt tcccagcgat ctttttggag gtgtcccttc tccccagaag ccccggcagg aaagtgttgc tggcaggagc gtcgtctcag cgctcggtgg ccagaatgga cggagatgtc atcattggag ccctcttctc agtccatcac cagcctccgg ccgagaaagt gcccgagagg aagtgtgggg agatcaggga gcagtatggc atccagaggg tggaggccat gttccacacg ttggataaga tcaacgcgga cccggtcctc ctgcccaaca tcaccctggg cagtgagatc cgggactcct gctggcactc ttccgtggct ctggaacaga gcattgagtt cattagggac tctctgattt ccattcgaga tgagaaggat gggatcaacc ggtgtctgcc tgacggccag tccctccccc caggcaggac taagaagccc attgcgggag tgatcggtcc cggctccagc tctgtagcca ttcaagtgca gaacctgctc cagctcttcg acatccccca gatcgcttat tcagccacaa gcatcgacct gagtgacaaa actttgtaca aatacttcct gagggttgtc ccttctgaca ctttgcaggc aagggccatg cttgacatag tcaaacgtta caattggacc tatgtctctg cagtccacac ggaagggaat tatggggaga gcggaatgga cgctttcaaa gagctggctg cccaggaagg cctctgtatc gcccattctg acaaaatcta cagcaacgct ggggagaaga gctttgaccg actcttgcgc aaactccgag agaggcttcc caaggctaga gtggtggtct gcttctgtga aggcatgaca gtgcgaggac tcctgagcgc catgcggcgc cttggcgtcg tgggcgagtt ctcactcatt ggaagtgatg gatgggcaga cagagatgaa gtcattgaag gttatgaggt ggaagccaac gggggaatca cgataaagct gcagtctcca gaggtcaggt catttgatga ttatttcctg aaactgaggc tggacactaa cacgaggaat ccctggttcc ctgagttctg gcaacatcgg ttccagtgcc gccttccagg acaccttctg gaaaatccca actttaaacg aatctgcaca ggcaatgaaa gcttagaaga aaactatgtc caggacagta agatggggtt tgtcatcaat gccatctatg ccatggcaca tgggctgcag aacatgcacc atgccctctg ccctggccac gtgggcctct gcgatgccat gaagcccatc gacggcagca agctgctgga cttcctcatc aagtcctcat tcattggagt atctggagag gaggtgtggt ttgatgagaa aggagacgct cctggaaggt atgatatcat gaatctgcag tacactgaag ctaatcgcta tgactatgtg cacgttggaa cctggcatga aggagtgctg aacattgatg attacaaaat ccagatgaac aagagtggag tggtgcggtc	A	Homo sapiens

tgtgtgcagt gagccttgct taaagggcca gattaaggtt atacggaaag gagaagtgag
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170     3093     Metabotropic NP_000829.1 MVGLLLFFFP AIFLEVSLLP RSPGRKVLLA GASSQRSVAR MDGDVIIGAL FSVHHQPPAE P     Homo
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		Glutamate Receptor 1		KVPERKCGEI REQYGIQRVE AMFHTLDKIN ADPVLLPNIT LGSEIRDSCW HSSVALEQSI EFIRDSLISI RDEKDGINRC LPDGQSLPPG RTKKPIAGVI GPGSSSVAIQ VQNLLQLFDI PQIAYSATSI DLSDKTLYKY FLRVVPSDTL QARAMLDIVK RYNWTYVSAV HTEGNYGESG MDAFKELAAQ EGLCIAHSDK IYSNAGEKSF DRLLRKLRER LPKARVVVCF CEGMTVRGLL SAMRRLGVVG EFSLIGSDGW ADRDEVIEGY EVEANGGITI KLQSPEVRSF DDYFLKLRLD TNTRNPWFPE FWQHRFQCRL PGHLLENPNF KRICTGNESL EENYVQDSKM GFVINAIYAM AHGLQNMHHA LCPGHVGLCD AMKPIDGSKL LDFLIKSSFI GVSGEEVWFD EKGDAPGRYD IMNLQYTEAN RYDYVHVGTW HEGVLNIDDY KIQMNKSGVV RSVCSEPCLK GQIKVIRKGE VSCCWICTAC KENEYVQDEF TCKACDLGWW PNADLTGCEP IPVRYLEWSN IESIIAIAFS CLGILVTLFV TLIFVLYRDT PVVKSSSREL CYIILAGIFL GYVCPFTLIA KPTTTSCYLQ RLLVGLSSAM CYSALVTKTN RIARILAGSK KKICTRKPRF MSAWAQVIIA SILISVQLTL VVTLIIMEPP MPILSYPSIK EVYLICNTSN LGVVAPLGYN GLLIMSCTYY AFKTRNVPAN FNEAKYIAFT MYTTCIIWLA FVPIYFGSNY KIITTCFAVS LSVTVALGCM FTPKMYIIIA KPERNVRSAF TTSDVVRMHV GDGKLPCRSN TFLNIFRRKK AGAGNANSNG KSVSWSEPGG GQVPKGQHMW HRLSVHVKTN ETACNQTAVI KPLTKSYQGS GKSLTFSDTS TKTLYNVEEE EDAQPIRFSP PGSPSMVVHR RVPSAATTPP LPPHLTAEET PLFLAEPALP KGLPPPLQQQ QQPPPQQKSL MDQLQGVVSN FSTAIPDFHA VLAGPGGPGN GLRSLYPPPP PPQHLQMLPL QLSTFGEELV SPPADDDDDS ERFKLLQEYV YEHEREGNTE EDELEEEEED LQAASKLTPD DSPALTPPSP FRDSVASGSS VPSSPVSESV LCTPPNVSYA SVILRDYKQS SSTL		sapiens
171	3094	Metabotropic Glutamate Receptor 2	NM_000839	ccatgggatc gctgcttgcg ctcctggcac tgctgccgct gtggggtgct gtggctgagg gcccagccaa gaaggtgctg accctggagg gagacttggt gctgggtggg ctgttcccag tgcaccagaa gggcggccca gcagaggact gtggtcctgt caatgagcac cgtggcatcc agcgcctgga ggccatgctt tttgcactgg accgcatcaa ccgtgacccg cacctgctgc ctggcgtgcg cctgggtgca cacatcctcg acagttgctc caaggacaca catgcgctgg agcaggcact ggactttgtg cgtgcctcac tcagccgtgg tgctgatgga tcacgccaca tctgccccga cggctcttat gcgacccatg gtgatgctcc cactgccatc actggtgtta ttggcggttc ctacagtgat gtctccatcc aggtggccaa cctcttgagg ctatttcaga tcccacagat tagctacgcc tctaccagtg ccaagctgag tgacaagtcc cgctatgact actttgcccg cacagtgcct cctgacttct tccaagccaa ggccatggct gagattctcc gcttcttcaa ctggacctat gtgtccactg aggcctctga gggcgactat ggcgagacag gcattgaggc ctttgagcta gaggctcgtg cccgcaacat ctgtgtggcc acctcggaga aagtgggccg tgccatgagc cgcgcggcct ttgagggtgt ggtgcgagcc ctgctgcaga agcccagtgc ccgcgtggct gtcctgttca cccgttctga ggatgcccgg gagctgcttg ctgccagcca gcgcctcaat gccagcttca cctgggtggc cagtgatggt tgggggcccc tggagagtgt ggtggcaggc agtgaggggg ctgctgaggg tgctatcacc atcgagctgg cctcctaccc catcagtgac tttgcctcct acttccagag cctggaccct tggaacaaca gccggaaccc ctggttccgt gaattctggg agcagaggtt ccgctgcagc ttccggcagc gagactgcgc agcccactct ctccgggctg tgccctttga acaggagtcc aagatcatgt ttgtggtcaa tgcagtgtac gccatggccc atgcgctcca caacatgcac cgtgccctct gccccaacac cacccggctc tgtgacgcga tgcggccagt taacgggcgc cgcctctaca aggactttgt gctcaacgtc aagtttgatg ccccctttcg cccagctgac acccacaatg	A	Homo sapiens

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172	3094	Metabotropic Glutamate Receptor 2	NP_000830.1	MGSLLALLAL LPLWGAVAEG PAKKVLTLEG DLVLGGLFPV HQKGGPAEDC GPVNEHRGIQ RLEAMLFALD RINRDPHLLP GVRLGAHILD SCSKDTHALE QALDFVRASL SRGADGSRHI CPDGSYATHG DAPTAITGVI GGSYSDVSIQ VANLLRLFQI PQISYASTSA KLSDKSRYDY FARTVPPDFF QAKAMAEILR FFNWTYVSTE ASEGDYGETG IEAFELEARA RNICVATSEK VGRAMSRAAF EGVVRALLQK PSARVAVLFT RSEDARELLA ASQRLNASFT WVASDGWGAL ESVVAGSEGA AEGAITIELA SYPISDFASY FQSLDPWNNS RNPWFREFWE QRFRCSFRQR DCAAHSLRAV PFEQESKIMF VVNAVYAMAH ALHNMHRALC PNTTRLCDAM RPVNGRRLYK DFVLNVKFDA PFRPADTHNE VRFDRFGDGI GRYNIFTYLR AGSGRYRYQK VGYWAEGLTL DTSLIPWASP SAGPLAASRC SEPCLQNEVK SVQPGEVCCW LCIPCQPYEY RLDEFTCADC GLGYWPNASL TGCFELPQEY IRWGDAWAVG PVTIACLGAL ATLFVLGVFV RHNATPVVKA SGRELCYILL GGVFLCYCMT FIFIAKPSTA VCTLRRLGLG TAFSVCYSAL LTKTNRIARI FGGAREGAQR PRFISPASQV AICLALISGQ LLIVVAWLVV EAPGTGKETA PERREVVTLR CNHRDASMLG SLAYNVLLIA LCTLYAFNTR KCPENFNEAK FIGFTMYTTC IIWLALLPIF YVTSSDYRVQ TTTMCVSVSL SGSVVLGCLF APKLHIILFQ PQKNVVSHRA PTSRFGSAAA RASSSLGQGS GSQFVPTVCN GREVVDSTTS SL	P	Homo sapiens
173	3095	Metabotropic Glutamate Receptor 3	NM_000840	cttttgtgtc ggatgaggag gaccaaccat gagccagagc ccgggtgcag gctcaccgcc gccgctgcca ccgcggtcag ctccagttcc tgccaggagt tgtcggtgcg aggaatttg tgacaggctc tgttagtctg ttcctccctt atttgaagga caggccaaag atccagtttg gaaatgagag aggactagca tgacacattg gctccaccat tgatatctcc cagaggtaca	A	Homo sapiens

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174	3095	Metabotropic Glutamate Receptor 3	NP_000831.1	MLTRLQVLTL ALFSKGFLLS LGDHNFLRRE IKIEGDLVLG GLFPINEKGT GTEECGRINE DRGIQRLEAM LFAIDEINKD DYLLPGVKLG VHILDTCSRD TYALEQSLEF VRASLTKVDE AEYMCPDGSY AIQENIPLLI AGVIGGSYSS VSIQVANLLR LFQIPQISYA STSAKLSDKS RYDYFARTVP PDFYQAKAMA EILRFFNWTY VSTVASEGDY GETGIEAFEQ EARLRNICIA TAEKVGRSNI RKSYDSVIRE LLQKPNARVV VLFMRSDDSR ELIAAASRAN ASFTWVASDG WGAQESIIKG SEHVAYGAIT LELASQPVRQ FDRYFQSLNP YNNHRNPWFR DFWEQKFQCS LQNKRNHRRV CDKHLAIDSS NYEQESKIMF VVNAVYAMAH ALHKMQRTLC PNTTKLCDAM KILDGKKLYK DYLLKINFTA PFNPNKDADS IVKFDTFGDG MGRYNVFNFQ NVGGKYSYLK VGHWAETLSL DVNSIHWSRN SVPTSQCSDP CAPNEMKNMQ PGDVCCWICI PCEPYEYLAD EFTCMDCGSG QWPTADLTGC YDLPEDYIRW EDAWAIGPVT IACLGFMCTC MVVTVFIKHN NTPLVKASGR ELCYILLFGV GLSYCMTFFF IAKPSPVICA LRRLGLGSSF AICYSALLTK TNCIARIFDG VKNGAQRPKF ISPSSQVFIC LGLILVQIVM VSVWLILEAP GTRRYTLAEK RETVILKCNV KDSSMLISLT YDVILVILCT VYAFKTRKCP ENFNEAKFIG FTMYTTCIIW LAFLPIFYVT SSDYRVQTTT MCISVSLSGF VVLGCLFAPK VHIILFQPQK NVVTHRLHLN RFSVSGTGTT YSQSSASTYV PTVCNGREVL DSTTSSL	P	Homo sapiens
175	3096	Metabotropic Glutamate Receptor 4	NM_000841	ccgagtgaca aggaggtggg agagggtagc agcatgggct acgcggttgg ctgccctcag tccccctgct gctgaagctg ccctgcccat gcccacccag gccgtggggc caggggcctg ccagggctag gagtgggcct gccgttcatg ggtctctagg gatttccgag atgcctggga agagaggctt gggctggtgg tgggcccggc tgccccttg cctgctcctc agcctttacg gcccctggat gccttcctcc ctgggaaagc ccaaaggcca ccctcacatg aattccatcc gcatagatgg ggacatcaca ctgggaggcc tgttcccggt gcatggccgg ggctcagagg gcaagccctg tggagaactt aagaaggaaa agggcatcca ccggctggag gccatgctgt tcgccctgga tcgcatcaac aacgacccgg acctgctgcc taacatcacg ctgggcgccc gcattctgga cacctgctcc agggacaccc atgccctcga gcagtcgctg acctttgtgc aggcgctcat cgagaaggat ggcacagagg tccgctgtgg cagtggcggc ccacccatca tcaccaagcc tgaacgtgtg gtgggtgtca tcggtgcttc agggagctcg gtctccatca tggtggccaa catccttcgc ctcttcaaga taccccagat cagctacgcc tccacagcgc cagacctgag tgacaacagc cgctacgact tcttctcccg cgtggtgccc tcggacacgt accaggccca ggccatggtg gacatcgtcc gtgccctcaa gtggaactat gtgtccacag	A	Homo sapiens

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176	3096	Metabotropic Glutamate Receptor 4	NP_000832.1	MPGKRGLGWW WARLPLCLLL SLYGPWMPSS LGKPKGHPHM NSIRIDGDIT LGGLFPVHGR GSEGKPCGEL KKEKGIHRLE AMLFALDRIN NDPDLLPNIT LGARILDTCS RDTHALEQSL TFVQALIEKD GTEVRCGSGG PPIITKPERV VGVIGASGSS VSIMVANILR LFKIPQISYA STAPDLSDNS RYDFFSRVVP SDTYQAQAMV DIVRALKWNY VSTVASEGSY GESGVEAFIQ KSREDGGVCI AQSVKIPREP KAGEFDKIIR RLLETSNARA VIIFANEDDI RRVLEAARRA NQTGHFFWMG SDSWGSKIAP VLHLEEVAEG AVTILPKRMS VRGFDRYFSS RTLDNNRRNI WFAEFWEDNF HCKLSRHALK KGSHVKKCTN RERIGQDSAY EQEGKVQFVI DAVYAMGHAL HAMHRDLCPG RVGLCPRMDP VDGTQLLKYI RNVNFSGIAG NPVTFNENGD APGRYDIYQY QLRNDSAEYK VIGSWTDHLH LRIERMHWPG SGQQLPRSIC SLPCQPGERK KTVKGMPCCW HCEPCTGYQY QVDRYTCKTC PYDMRPTENR TGCRPIPIIK LEWGSPWAVL PLFLAVVGIA ATLFVVITFV RYNDTPIVKA SGRELSYVLL AGIFLCYATT FLMIAEPDLG TCSLRRIFLG LGMSISYAAL LTKTNRIYRI FEQGKRSVSA PRFISPASQL AITFSLISLQ LLGICVWFVV DPSHSVVDFQ DQRTLDPRFA RGVLKCDISD LSLICLLGYS MLLMVTCTVY AIKTRGVPET FNEAKPIGFT MYTTCIVWLA FIPIFFGTSQ SADKLYIQTT TLTVSVSLSA SVSLGMLYMP KVYIILFHPE QNVPKRKRSL KAVVTAATMS NKFTQKGNFR PNGEAKSELC ENLEAPALAT KQTYVTYTNH AI	P	Homo sapiens
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178	3097	Metabotropic Glutamate Receptor 5	NP_000833.1	MVLLLILSVL LLKEDVRGSA QSSERRVVAH MPGDIIIGAL FSVHHQPTVD KVHERKCGAV REQYGIQRVE AMLHTLERIN SDPTLLPNIT LGCEIRDSCW HSAVALEQSI EFIRDSLISS EEEEGLVRCV DGSSSSFRSK KPIVGVIGPG SSSVAIQVQN LLQLFNIPQI AYSATSMDLS DKTLFKYFMR VVPSDAQQAR AMVDIVKRYN WTYVSAVHTE GNYGESGMEA FKDMSAKEGI CIAHSYKIYS NAGEQSFDKL LKKLTSHLPK ARVVACFCEG MTVRGLLMAM RRLGLAGEFL LLGSDGWADR YDVTDGYQRE AVGGITIKLQ SPDVKWFDDY YLKLRPETNH RNPWFQEFWQ HRFQCRLEGF PQENSKYNKT CNSSLTLKTH HVQDSKMGFV INAIYSMAYG LHNMQMSLCP GYAGLCDAMK PIDGRKLLES LMKTNFTGVS GDTILFDENG DSPGRYEIMN FKEMGKDYFD YINVGSWDNG ELKMDDDEVW SKKSNIIRSV CSEPCEKGQI KVIRKGEVSC CWTCTPCKEN EYVFDEYTCK ACQLGSWPTD DLTGCDLIPV QYLRWGDPEP IAAVVFACLG LLATLFVTVV FIIYRDTPVV KSSSRELCYI ILAGICLGYL CTFCLIAKPK QIYCYLQRIG IGLSPAMSYS ALVTKTNRIA RILAGSKKKI CTKKPRFMSA CAQLVIAFIL ICIQLGIIVA LFIMEPPDIM HDYPSIREVY LICNTTNLGV VTPLGYNGLL ILSCTFYAFK TRNVPANFNE AKYIAFTMYT TCIIWLAFVP IYFGSNYKII TMCFSVSLSA TVALGCMFVP KVYIILAKPE RNVRSAFTTS TVVRMHVGDG KSSSAASRSS SLVNLWKRRG SSGETLSSNG KSVTWAQNEK SSRGQHLWQR LSIHINKKEN PNQTAVIKPF PKSTESRGLG AGAGAGGSAG GVGATGGAGC AGAGPGGPES PDAGPKALYD VAEAEEHFPA PARPRSPSPI STLSHRAGSA SRTDDDVPSL HSEPVARSSS SQGSLMEQIS SVVTRFTANI SELNSMMLST AAPSPGVGAP LCSSYLIPKE IQLPTTMTTF AEIQPLPAIE VTGGAQPAAG AQAAGDAARE SPAAGPEAAA AKPDLEELVA LTPPSPFRDS VDSGSTTPNS PVSESALCIP SSPKYDTLII RDYTQSSSSL	P	Homo sapiens

179	3098	Metabotropic Glutamate Receptor 6	NM_000843	cggaggcccg ggcaggccgg ctgagctaac tccccagagc caaagtggaa ggcgcgcccc gagcgccttc tccccaggac cccggtgtcc ctccccgcgc cccgagcccg cgctctcctt cccccgccct cagagcgctc cccgcccctc tgtctccccg cagcccgcta gacgagccga tggcgcggcc ccggagagcc cgggagccgc tgctcgtggc gctgctgccg ctggcgtggc tggcgcaggc gggcctggcg cgcgcggcgg gctctgtgcg cctggcgggc ggcctgacgc tgggcggcct gttcccggtg cacgcgcggg gcgcggcggg ccgggcgtgc gggccgctga agaaggagca gggcgtgcac cggctggagg ccatgctgta cgcgctggac cgcgtcaacg ccgaccccga gctgctgccc ggcgtgcgcc tgggcgcgcg gctgctggac acctgctcgc gggacaccta cgcgctggag caggcgctga gcttcgtgca ggcgctgatc cgcggccgcg gcgacggcga cgaggtgggc gtgcgctgcc cgggaggcgt ccctccgctg cgcccccgcgc cccccgagcg cgtcgtggcc gtcgtgggcg cctcggccag ctccgtctcc atcatggtcg ccaacgtgct gcgcctgttt gcgatacccc agatcagcta tgcctccaca gccccggagc tcagcgactc cacacgctat gacttcttct cccgggtggt gccacccgac tcctaccagg cgcaggccat ggtggacatc gtgagggcac tgggatggaa ctatgtgtcc acgctggcct ccgagggcaa ctatggcgaa agtggggttg aggccttcgt tcagatctcc cgagaggctg ggggggtctg tattgcccag tctatcaaga ttcccaggga accaaagcca ggagagttca gcaaggtgat caggagactc atggagacgc ccaacgcccg gggcatcatc atctttgcca atgaggatga catcaggcgg gtcctggagg cagctcgcca ggccaacctg accggccact tcctgtgggt cggctcagac agctggggag ccaagacctc acccatcttg agcctggagg acgtggccgt tggggccatc accatcctgc ccaaaagggc ctccatcgac ggatttgacc agtacttcat gactcgatcc ctggagaaca accgcaggaa catctggttc gccgagttct gggaagagaa ttttaactgc aaactgacca gctcaggtac ccagtcagat gattccaccc gcaaatgcac aggcgaggaa cgcatcggcc gggactccac ctacgagcag gagggcaagg tgcagtttgt gattgatgcg gtgtatgcca ttgcccacgc cctccacagc atgcaccagg cgctctgccc tgggcacaca ggcctgtgcc cggcgatgga acccaccgat gggcggatgc ttctgcagta cattcgagct gtccgcttca acggcagcgc aggaacccct gtgatgttca acgagaacgg ggatgcgccc gggcggtacg acatcttcca gtaccaggcg accaatggca gtgccagcag tggcgggtac caggcagtgg gccagtgggc agagaccctc agactggatg tggaggccct gcagtggtct ggcgaccccc acgaggtgcc ctcgtctctg tgcagcctgc cctgcgggcc gggggagcgg aagaagatgg tgaagggcgt cccctgctgt tggcactgcg aggcctgtga cgggtaccgc ttccaggtgg acgagttcac atgcgaggcc tgtcctgggg acatgaggcc cacgcccaac cacacgggct gccgccccac acctgtggtg cgcctgagct ggtcctcccc ctgggcagcc ccgccgctcc tcctggccgt gctgggcatc gtggccacta ccacggtggt ggccaccttc gtgcggtaca acaacacgcc catcgtccgg gcctcgggcc gagagctcag ctacgtcctc ctcaccggca tcttcctcat ctacgccatc accttcctca tggtggctga gcctggggcc gcggtctgtg ccgcccgcag gctcttcctg ggcctgggca cgaccctcag ctactctgcc ctgctcacca agaccaaccg tatctaccgc atctttgagc agggcaagcg ctcggtcaca ccccctccct tcatcagccc cacctcacag ctggtcatca ccttcagcct cacctccctg caggtggtgg ggatgatagc atggctgggg gcccggcccc cacacagcgt gattgactat gaggaacagc ggacagtgga ccccgagcag gccagagggg tgctcaagtg cgacatgtcg gatctgtctc tcatcggctg cctgggctac agcctcctgc	A	Homo sapiens

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180	3098	Metabotropic Glutamate Receptor 6	NP_000834.1	MARPRRAREP LLVALLPLAW LAQAGLARAA GSVRLAGGLT LGGLFPVHAR GAAGRACGPL KKEQGVHRLE AMLYALDRVN ADPELLPGVR LGARLLDTCS RDTYALEQAL SFVQALIRGR GDGDEVGVRC PGGVPPLRPA PPERVVAVVG ASASSVSIMV ANVLRLFAIP QISYASTAPE LSDSTRYDFF SRVVPPDSYQ AQAMVDIVRA LGWNYVSTLA SEGNYGESGV EAFVQISREA GGVCIAQSIK IPREPKPGEF SKVIRRLMET PNARGIIIFA NEDDIRRVLE AARQANLTGH FLWVGSDSWG AKTSPILSLE DVAVGAITIL PKRASIDGFD QYFMTRSLEN NRRNIWFAEF WEENFNCKLT SSGTQSDDST RKCTGEERIG RDSTYEQEGK VQFVIDAVYA IAHALHSMHQ ALCPGHTGLC PAMEPTDGRM LLQYIRAVRF NGSAGTPVMF NENGDAPGRY DIFQYQATNG SASSGGYQAV GQWAETLRLD VEALQWSGDP HEVPSSLCSL PCGPGERKKM VKGVPCCWHC EACDGYRFQV DEFTCEACPG DMRPTPNHTG CRPTPVVRLS WSSPWAAPPL LLAVLGIVAT TTVVATFVRY NNTPIVRASG RELSYVLLTG IFLIYAITFL MVAEPGAAVC AARRLFLGLG TTLSYSALLT KTNRIYRIFE QGKRSVTPPP FISPTSQLVI TFSLTSLQVV GMIAWLGARP PHSVIDYEEQ RTVDPEQARG VLKCDMSDLS LIGCLGYSLL LMVTCTVYAI KARGVPETFN EAKPIGFTMY TTCIIWLAFV PIFFGTAQSA EKIYIQTTTL TVSLSLSASV SLGMLYVPKT YVILFHPEQN VQKRKRSLKA TSTVAAPPKG EDAEAHK	P	Homo sapiens
181.	3099	Metabotropic Glutamate Receptor 7	NM_000844	gaattcccaa cacccaggta atttttgtat ttttagtaga gattgggttt caccatgttg gccaggatgg tctccatctc ttgacctcgg gatcctcctg gcttggtctc caaaagtgct gggattacag gcatgagtca ccatatccag ccaactgcag tcattcttat ggggcaaaca cttggctgaa cccaggtttt ctaaagatac aaacccatgg gcaacaccaa gcattctaat ggaataggca cctggctgac tccaggcatt ctaataatag agacacctgg gcgaactcag	A	Homo sapiens

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				actttaggaa aaaaagcatg tatgtttttt actgtttgta ataagtactt tcgttaatct		
				tgctgcttat gtgccaattt agtggaaaaa aacaaccctt gctgaaaaat tccctctttc		
				cattctcttt caattctgtg atattgtcca agaatgtatc aataaggaat tc		
182	3099	Metabotropic	NP_000835.1	MVQLRKLLRV LTLMKFPCCV LEVLLCALAA AARGQEMYAP HSIRIEGDVT LGGLFPVHAK	P	Homo
		Glutamate		GPSGVPCGDI KRENGIHRLE AMLYALDQIN SDPNLLPNVT LGARILDTCS RDTYALEQSL		sapiens
		Receptor 7		TFVQALIQKD TSDVRCTNGE PPVFVKPEKV VGVIGASGSS VSIMVANILR LFQIPQISYA		
				STAPELSDDR RYDFFSRVVP PDSFQAQAMV DIVKALGWNY VSTLASEGSY GEKGVESFTQ		
				ISKEAGGLCI AQSVRIPQER KDRTIDFDRI IKQLLDTPNS RAVVIFANDE DIKQILAAAK		
				RADQVGHFLW VGSDSWGSKI NPLHQHEDIA EGAITIQPKR ATVEGFDAYF TSRTLENNRR		
				NVWFAEYWEE NFNCKLTISG SKKEDTDRKC TGQERIGKDS NYEQEGKVQF VIDAVYAMAH		
				ALHHMNKDLC ADYRGVCPEM EQAGGKKLLK YIRNVNFNGS AGTPVMFNKN GDAPGRYDIF		
				QYQTTNTSNP GYRLIGQWTD ELQLNIEDMQ WGKGVREIPA SVCTLPCKPG QRKKTQKGTP		
				CCWTCEPCDG YQYQFDEMTC QHCPYDQRPN ENRTGCQDIP IIKLEWHSPW AVIPVFLAML		
				GIIATIFVMA TFIRYNDTPI VRASGRELSY VLLTGIFLCY IITFLMIAKP DVAVCSFRRV		
				FLGLGMCISY AALLTKTNRI YRIFEQGKKS VTAPRLISPT SQLAITSSLI SVQLLGVFIW		
				FGVDPPNIII DYDEHKTMNP EQARGVLKCD ITDLQIICSL GYSILLMVTC TVYAIKTRGV		
				PENFNEAKPI GFTMYTTCIV WLAFIPIFFG TAQSAEKLYI QTTTLTISMN LSASVALGML		
				YMPKVYIIIF HPELNVQKRK RSFKAVVTAA TMSSRLSHKP SDRPNGEAKT ELCENVDPNS		

				PAAKKKYVSY NNLVI	
183	3100	Metabotropic Glutamate Receptor 8	NM_000845	tgctgtgttg caagaataaa ctttgggtct tggattgcaa taccacctgt ggagaaaatg A gtatgcgagg gaaagcgatc agcctcttgc ccttgtttct tcctcttgac cgccaagttc tactggatcc tcacaatgat gcaaagaact cacagccagg agtatgccca ttccatacgg gtggatgggg acattatttt gggggtctc ttccctgtcc acgcaaaggg agagagaggg gtgccttgtg gggagctgaa gaaggaaaag gggattcaca gactggaggc catgctttat gcaattgacc agattaacaa ggaccctgat ctcctttcca acatcactct gggtgtccgc atcctcgaca cgtgctctag ggacacctat gctttggagc agtctctaac attcgtgcag gcattaatag agaaagatgc ttcggatgtg aagtgtgcta atggagatcc acccattttc accaagcccg acaagatttc tggcgtcata ggtgctgcag caagctccgt gtccatcatg gttgctaaca ttttaagact ttttaagata cctcaaatca gctatgcatc cacagcccca gagctaagtg ataacaccag gtatgacttt ttctctcgag tggttccgcc tgactcctac caagcccaag ccatggtgga catcgtgaca gcactgggat ggaattatgt ttcgacactg gcttctgagg ggaactatgg tgagagcggt gtggaggcct tcacccagat ctcgagggag attggtggtg tttgcattgc tcagtcacag aaaatcccac gtgaaccaag acctggagaa tttgaaaaaa ttatcaaacg cctgctagaa acacctaatg ctcgagcagt gattatgttt gccaatgagg atgacatcag gaggatattg gaagcagcaa aaaaactaaa ccaaagtggg cattttctct ggattggctc agatagttgg ggatccaaaa tagcacctgt ctatcagcaa gaggagattg cagaaggggc tgtgacaatt ttgcccaaac gagcatcaat tgatggattt gatcgatact ttagaagccg aactcttgcc aataatcgaa gaaatgtgtg gtttgcagaa ttctgggagg agaattttgg ctgcaagtta ggatcacatg ggaaaaggaa cagtcatata aagaaatgca cagggctgga gcgaattgct cgggattcat cttatgaaca ggaaggaaag gtccaatttg taattgatgc tgtatattcc atggcttacg ccctgcacaa tatgcacaaa gatctctgcc ctggatacat tggcctttgt ccacgaatga gtaccattga tgggaaagag ctacttggtt atattcgggc tgtaaatttt aatggcagtg ctggcactcc tgtcactttt aatgaaaacg gagatgctcc tggacgttat gatatcttcc agtatcaaat aaccaacaaa agcacagagt acaaagtcat cggccactgg accaatcagc ttcatctaaa agtggaagac atgcagtggg ctcatagaga acatactcac ccggcgtctg tctgcagcct gccgtgtaag ccaggggaga ggaagaaaac ggtgaaaggg gtcccttgct gctggcactg tgaacgctgt gaaggttaca actaccaggt ggatgagctg tcctgtgaac tttgccctct ggatcagaga cccaacatga accgcacagg ctgccagctt atccccatca tcaaattgga gtggcattct ccctgggctg tggtgcctgt gtttgttgca atattgggaa tcatcgccac cacctttgtg atcgtgacct ttgtccgcta taatgacaca cctatcgtga gggcttcagg acgcgaactt agttacgtgc tcctaacggg gatttttctc tgttattcaa tcacgttttt aatgattgca gcaccagata caatcatatg ctccttccga cgggtcttcc taggacttgg catgtgtttc agctatgcag cccttctgac caaaacaaac cgtatccacc gaatatttga gcaggggaag aaatctgtca cagcgcccaa gttcattagt ccagcatctc agctggtgat caccttcagc ctcatctccg tccagctcct tggagtgttt gtctggtttg ttgtggatcc cccccacatc atcattgact atggagagca gcggacacta gatccagaga aggccagggg agtgctcaag tgtgacattt ctgatctctc actcatttgt tcacttggat acagtatcct cttgatggtc	Homo sapiens

				acttgtactg tttatgccaa taaaacgaga ggtgtcccag agactttcaa tgaagccaaa cctattggat ttaccatgta taccacctgc atcatttggt tagctttcat ccccatcttt tttggtacag cccagtcagc agaaaagatg tacatccaga caacaacact tactgtctcc atgagtttaa gtgcttcagt atctctgggc atgctctata tgcccaaggt ttatattata atttttcatc cagaacagaa tgttcaaaaa cgcaagagga gcttcaaggc tgtggtgaca gctgccacca tgcaaagcaa actgatccaa aaaggaaatg acagaccaaa tggcgaggtg aaaagtgaac tctgtgagag tcttgaaacc aacacttcct ctaccaagac aacatatatc agttacagca atcattcaat ctgaaacagg gaaatggcac aatctgaaga gacgtggtat atgatcttaa atgatgaaca tgagaccgca aaaattcact cctggagatc tccgtagact acaatcaatc aaatcaatag tcagtcttgt aaggaacaaa aattagccat gagccaaaag tatcaataaa cggggagtga agaaacccgt tttatacaat aaaaccaatg agtgtcaagc taaagtattg cttattcatg agcagttaaa acaaatcaca aaaggaaaac taatgttagc tcgtgaaaaa aatgctgttg aaataaataa tgtctgatgt tattcttgta tttttctgtg attgtgagaa ctcccgttcc tgtcccacat tgtttaactt gtataagaca atgagtctgt ttcttgtaat ggctgaccag attgaagccc tgggttgtgc taaaaataaa tgcaatgatt gatgcatgca atttttttata caaataattt atttctaata ataaaggaat gttttgcaaa aaaaaaaaaa aaaaactcga g		
184	3100	Metabotropic Glutamate Receptor 8	NP_000836.1	MVCEGKRSAS CPCFFLLTAK FYWILTMMQR THSQEYAHSI RVDGDIILGG LFPVHAKGER GVPCGELKKE KGIHRLEAML YAIDQINKDP DLLSNITLGV RILDTCSRDT YALEQSLTFV QALIEKDASD VKCANGDPPI FTKPDKISGV IGAAASSVSI MVANILRLFK IPQISYASTA PELSDNTRYD FFSRVVPPDS YQAQAMVDIV TALGWNYVST LASEGNYGES GVEAFTQISR EIGGVCIAQS QKIPREPRPG EFEKIIKRLL ETPNARAVIM FANEDDIRRI LEAAKKLNQS GHFLWIGSDS WGSKIAPVYQ QEEIAEGAVT ILPKRASIDG FDRYFRSRTL ANNRRNVWFA EFWEENFGCK LGSHGKRNSH IKKCTGLERI ARDSSYEQEG KVQFVIDAVY SMAYALHNMH KDLCPGYIGL CPRMSTIDGK ELLGYIRAVN FNGSAGTPVT FNENGDAPGR YDIFQYQITN KSTEYKVIGH WTNQLHLKVE DMQWAHREHT HPASVCSLPC KPGERKKTVK GVPCCWHCER CEGYNYQVDE LSCELCPLDQ RPNMNRTGCQ LIPIIKLEWH SPWAVVPVFV AILGIIATTF VIVTFVRYND TPIVRASGRE LSYVLLTGIF LCYSITFLMI AAPDTIICSF RRVFLGLGMC FSYAALLTKT NRIHRIFEQG KKSVTAPKFI SPASQLVITF SLISVQLLGV FVWFVVDPPH IIIDYGEQRT LDPEKARGVL KCDISDLSLI CSLGYSILLM VTCTVYANKT RGVPETFNEA KPIGFTMYTT CIIWLAFIPI FFGTAQSAEK MYIQTTTLTV SMSLSASVSL GMLYMPKVYI IIFHPEQNVQ KRKRSFKAVV TAATMQSKLI QKGNDRPNGE VKSELCESLE TNTSSTKTTY ISYSNHSI	P	Homo sapiens
185	3212	Opioid mu-type Receptor	NM_000914	ggaattccgg ctataggcag aggagaatgt cagatgctca gctcggtccc ctccgcctga cgctcctctc tgtctcagcc aggactggtt tctgtaagaa acagcaggag ctgtggcagc ggcgaaagga agcggctgag gcgcttggaa cccgaaaagt ctcggtgctc ctggctacct cgcacagcgg tgcccgcccg gccgtcagta ccatggacag cagcgctgcc cccacgaacg ccagcaattg cactgatgcc ttggcgtact caagttgctc cccagcaccc agccccggtt cctgggtcaa cttgtcccac ttagatggca acctgtccga cccatgcggt ccgaaccgca ccaacctggg cgggagagac agcctgtgcc ctccgaccgg cagtccctcc atgatcacgg ccatcacgat catggccctc tactccatcg tgtgcgtggt ggggctcttc ggaaacttcc	A	Homo sapiens

				tggtcatgta tgtgattgtc agatacacca agatgaagac tgccaccaac atctacattt tcaaccttgc tctggcagat gccttagcca ccagtaccct gcccttccag agtgtgaatt acctaatggg aacatggcca tttggaacca tcctttgcaa gatagtgatc tccatagatt actataacat gttcaccagc atattcaccc tctgcaccat gagtgttgat cgatacattg cagtctgcca ccctgtcaag gccttagatt tccgtactcc ccgaaatgcc aaaattatca atgtctgcaa ctggatcctc tcttcagcca ttggtcttcc tgtaatgttc atggctacaa caaaatacag gcaaggttcc atagattgta cactaacatt ctctcatcca acctggtact gggaaaacct cgtgaagatc tgtgttttca tcttcgcctt cattatgcca gtgctcatca ttaccgtgtg ctatggactg atgatcttgc gcctcaagag tgtccgcatg ctctctggct ccaaagaaaa ggacaggaat cttcgaagga tcaccaggat ggtgctggtg gtggtggctg tgttcatcgt ctgctggact cccattcaca tttacgtcat cattaaagcc ttggttacaa tcccagaaac tacgttccag actgtttctt ggcacttctg cattgctcta ggttacacaa acagctgcct caacccagtc ctttatgcat ttctggatga aaacttcaaa cgatgcttca gagagttctg tatcccaacc tcttccaaca ttgagcaaca aaactccact cgaattcgtc agaacactag agaccacccc tccacggcca atacagtgga tagaactaat catcagctag aaaatctgga agcagaaact gctccgttgc cctaacaggg tctcatgcca ttccgacctt caccaagctt agaagccacc atgtatgtgg aagcaggttg cttcaagaat gtgtaggagg ctctaattct ctaggaaagt gcctactttt aggtcatcca acctctttcc tctctggcca ctctgctctg cacattagag ggacagccaa aagtaagtgg agcatttgga aggaaaggaa tataccacac cgaggagtcc agtttgtgca agacacccag tggaaccaaa acccatcgtg gtatgtgaat tgaagtcatc ataaaaggtg acccttctgt ctgtaagatt ttattttcaa gcaaatattt atgacctcaa caaagaagaa ccatcttttg ttaagttcac cgtagtaaca cataaagtaa atgctacctc tgatcaaagc accttgaatg gaaggtccga gtctttttag tgtttttgca agggaatgaa tccattattc tattttagac ttttaacttc aacttaaaat tagcatctgg ctaaggcatc attttcacct ccatttcttg gttttgtatt gtttaaaaaa aataacatct ctttcatcta gctccataat tgcaagggaa gagattagca tgaaaggtaa tctgaaacac agtcatgtgt canctgtaga aaggttgatt ctcatgcact ncaaatactt ccaaagagtc atcatggggg atttttcatt cttaggcttt cagtggtttg ttcctggaat tc		
186	3212	Opioid mu-type Receptor	NP_000905.1	MDSSAAPTNA SNCTDALAYS SCSPAPSPGS WVNLSHLDGN LSDPCGPNRT NLGGRDSLCP PTGSPSMITA ITIMALYSIV CVVGLFGNFL VMYVIVRYTK MKTATNIYIF NLALADALAT STLPFQSVNY LMGTWPFGTI LCKIVISIDY YNMFTSIFTL CTMSVDRYIA VCHPVKALDF RTPRNAKIIN VCNWILSSAI GLPVMFMATT KYRQGSIDCT LTFSHPTWYW ENLVKICVFI FAFIMPVLII TVCYGLMILR LKSVRMLSGS KEKDRNLRRI TRMVLVVVAV FIVCWTPIHI YVIIKALVTI PETTFQTVSW HFCIALGYTN SCLNPVLYAF LDENFKRCFR EFCIPTSSNI EQQNSTRIRQ NTRDHPSTAN TVDRTNHQLE NLEAETAPLP	P	Homo sapiens
187	3223	Muscarinic acetylcholine Receptor M1	NM_000738	atgaacactt cagccccacc tgctgtcagc cccaacatca ccgtcctggc accaggaaag ggtccctggc aagtggcctt cattgggatc accacgggcc tcctgtcgct agccacagtg acaggcaacc tgctggtact catctctttc aaggtcaaca cggagctcaa gacagtcaat aactacttcc tgctgagcct ggcctgtgct gacctcatca tcggtacctt ctccatgaac ctctatacca cgtacctgct catgggccac tgggctctgg gcacgctggc ttgtgacctc	A	Homo sapiens

				tggctggccc tggactatgt ggccagcaat gcctccgtca tgaatctgct gctcatcagc tttgaccgct acttctccgt gactcggccc ctgagctacc gtgccaagcg cacaccccgc cgggcagctc tgatgatcgg cctggcctgg ctggtttcct ttgtgctctg ggccccagcc atcctcttct ggcagtacct ggtaggggag cggacgatgc tagctgggca gtgctacatc cagttcctct cccagcccat catcaccttt ggcacagcca tggctgcctt ctacctccct gtcacagtca tgtgcacgct ctactggcgc atctaccggg agacagagaa ccgagcacgg gagctggcag cccttcaggg ctccgagacg ccaggcaaag gggtggcag cagcagcagc tcagagaggt ctcagccagg ggctgagggc tcaccagaga ctcctccagg ccgctgctgt cgctgctgcc gggcccccag gctgctgcag gcctacagct ggaaggaaga agaggaagag gacgaaggct ccatggagtc cctcacatcc tcagagggag aggagcctgg ctccgaagtg gtgatcaaga tgccaatggt ggaccccgag gcacaggccc ccaccaagca gcccccacgg agctccccaa atacagtcaa gaggccgact aagaaagggc gtgatcgagc tggcaagggc cagaagcccc gtggaaagga gcagctggcc aagcggaaga ccttctcgct ggtcaaggag aagaaggcgg ctcggaccct gagtgccatc ctcctggcct tcatcctcac ctggacaccg tacaacatca tggtgctggt gtccaccttc tgcaaggact gtgttcccga gaccctgtgg gagctgggct actggctgtg ctacgtcaac agcaccatca accccatgtg ctacgcactc tgcaacaaag ccttccggga cacctttcgc ctgctgctgc tttgccgctg ggacaagaga cgctggcgca agatccccaa gcgccctggc tccgtgcacc gcactccctc ccgccaatgc tga		
188	3223	Muscarinic acetylcholine Receptor M1	NP_000729.1	MNTSAPPAVS PNITVLAPGK GPWQVAFIGI TTGLLSLATV TGNLLVLISF KVNTELKTVN NYFLLSLACA DLIIGTFSMN LYTTYLLMGH WALGTLACDL WLALDYVASN ASVMNLLLIS FDRYFSVTRP LSYRAKRTPR RAALMIGLAW LVSFVLWAPA ILFWQYLVGE RTMLAGQCYI QFLSQPIITF GTAMAAFYLP VTVMCTLYWR IYRETENRAR ELAALQGSET PGKGGGSSSS SERSQPGAEG SPETPPGRCC RCCRAPRLLQ AYSWKEEEEE DEGSMESLTS SEGEEPGSEV VIKMPMVDPE AQAPTKQPPR SSPNTVKRPT KKGRDRAGKG QKPRGKEQLA KRKTFSLVKE KKAARTLSAI LLAFILTWTP YNIMVLVSTF CKDCVPETLW ELGYWLCYVN STINPMCYAL CNKAFRDTFR LLLLCRWDKR RWRKIPKRPG SVHRTPSRQC	P	Homo sapiens
189	3224	Muscarinic acetylcholine Receptor M2	NM_000739	atgaataact caacaaactc ctctaacaat agcctggctc ttacaagtcc ttataagaca tttgaagtgg tgtttattgt cctggtggct ggatccctca gtttggtgac cattatcggg aacatcctag tcatggtttc cattaaagtc aaccgccacc tccagaccgt caacaattac tttttattca gcttggcctg tgctgacctt atcataggtg ttttctccat gaacttgtac accctctaca ctgtgattgg ttactggcct ttgggacctg tggtgtgtga cctttggcta gccctggact atgtggtcag caatgcctca gttatgaatc tgctcatcat cagctttgac aggtacttct gtgtcacaaa acctctgacc tacccagtca agcggaccac aaaaatggca ggtatgatga ttgcagctgc ctgggtcctc tctttcatcc tctgggctcc agccattctc ttctggcagt tcattgtagg ggtgagaact gtggaggatg gggagtgcta cattcagttt ttttccaatg ctgctgtcac ctttggtacg gctattgcag ccttctattt gccagtgatc atcatgactg tgctatattg gcacatatcc cgagccagca agagcaggat aaagaaggac aagaaggagc ctgttgccaa ccaagacccc gtttctccaa gtctggtaca aggaaggata gtgaagccaa acaataacaa catgcccagc agtgacgatg gcctggagca caacaaaatc cagaatggca aagcccccag ggatcctgtg actgaaaact gtgttcaggg agaggagaag	A	Homo sapiens

				gagagctcca atgactccac ctcagtcagt gctgttgcct ctaatatgag agatgatgaa ataacccagg atgaaaacac agtttccact tccctgggcc attccaaaga tgagaactct aagcaaacat gcatcagaat tggcaccaag accccaaaaa gtgactcatg taccccaact aataccaccg tggaggtagt ggggtcttca ggtcagaatg gagatgaaaa gcagaatatt gtagcccgca agattgtgaa gatgactaag cagcctgcaa aaaagaagcc tcctccttcc cgggaaaaga aagtcaccag gacaatcttg gctattctgt tggctttcat catcacttgg gccccataca atgtcatggt gctcattaac acctttgtg caccttgcat ccccaacact gtgtggacaa ttggttactg gctttgttac atcaacagca ctatcaaccc tgcctgctat gcactttgca atgccacctt caagaagacc tttaaacacc ttctcatgtg tcattataag aacataggcg ctacaaggta a		
190	3224	Muscarinic acetylcholine Receptor M2	NP_000730.1	MNNSTNSSNN SLALTSPYKT FEVVFIVLVA GSLSLVTIIG NILVMVSIKV NRHLQTVNNY FLFSLACADL IIGVFSMNLY TLYTVIGYWP LGPVVCDLWL ALDYVVSNAS VMNLLIISFD RYFCVTKPLT YPVKRTTKMA GMMIAAAWVL SFILWAPAIL FWQFIVGVRT VEDGECYIQF FSNAAVTFGT AIAAFYLPVI IMTVLYWHIS RASKSRIKKD KKEPVANQDP VSPSLVQGRI VKPNNNNMPS SDDGLEHNKI QNGKAPRDPV TENCVQGEEK ESSNDSTSVS AVASNMRDDE ITQDENTVST SLGHSKDENS KQTCIRIGTK TPKSDSCTPT NTTVEVVGSS GQNGDEKQNI VARKIVKMTK QPAKKKPPPS REKKVTRTIL AILLAFIITW APYNVMVLIN TFCAPCIPNT VWTIGYWLCY INSTINPACY ALCNATFKKT FKHLLMCHYK NIGATR	P	Homo sapiens
191	3226	Muscarinic acetylcholine Receptor M4	LG1143	CCTGGCAGTG CCGATGTTCC GATACTGGCA CAGCAGCAGG TGCCGGAAGG TCTTTTTAAA GGTGGCGTTG CACAGAGCAT AGCAGGCAGG GTTGATGGTG CTGTTGACGT AGCAGAGCCA GTAGCCAATG GACCACACCG GGTCAGGGAT GCAGCTCTGG CAGAAGGTGT TCACCAGGAC CATGACGTTG TGAGGCGTCC CGGTGAGGAT GAAAGCTAAC ANAATGGCAA AGATCGGTCG TGGCACTTTG CGCTCCCGGG CCCGCATCTG CCGCTTCTTG CGCACCTGGG TGCGAGCGAT GCTAGCGAAC TTGCGGGCCA CGTTGGCCGC AGGCGCATGC CAGNCGGCGT GGGAGGGACA ATCTCAGGGC TGGCACACAC TCATGGGCTG GCTGGCTTCG TCAAATTTTG GATCTTGGAC CATCTGGGAG GCTTGGTTGA AGGCCCCCGG CTCGGACTTG CGGGCATGAA TCCAGGCCTT ACTCTANAGG ATCCCCCCCT CTCC	A	Homo sapiens
192	3226	Muscarinic acetylcholine Receptor M4	NM_000741	atggccaact tcacacctgt caatggcagc tcgggcaatc agtccgtgcg cctggtcacg tcatcatccc acaatcgcta tgagacggtg gaaatggtct tcattgccac agtgacaggc tccctgagcc tggtgactgt cgtgggcaac atcctggtga tgctgtccat caaggtcaac aggcagctgc agacagtcaa caactacttc ctcttcagcc tggcgtgtgc tgatctcatc ataggcgcct tctccatgaa cctctacacc gtgtacatca tcaagggcta ctggcccctg ggcgccgtgg tctgcgacct gtggctggcc ctggactacg tggtgagcaa cgcctccgtc atgaaccttc tcatcatcag ctttgaccgc tacttctgcg tcaccaagcc tctcacctac cctgcccggc gcaccaccaa gatggcaggc ctcatgattg ctgctgcctg ggtactgtcc ttcgtgctct gggcgcctgc catcttgttc tggcagtttg tggtgggtaa gcggacggtg cccgacaacc actgcttcat ccagttcctg tccaacccag cagtgacctt tggcacagcc attgctgcct tctacctgcc tgtggtcatc atgacggtgc tgtacatcca catctccctg gccagtcgca gccgagtcca caagcaccgg cccgagggcc cgaaggagaa gaaagccaag acgctggcct tcctcaagag cccactaatg aagcagagcg tcaagaagcc ccgcccggga ggcgcccgg gaggactgcg caatggcaag ctggaggagg cccccccgcc agcgctgcca	A	Homo sapiens

				ccgccaccgc gccccgtggc tgataaggac acttccaatg agtccagctc aggcagtgcc acccagaaca ccaaggaacg cccagccaca gagctgtcca ccacagaggc caccactccc gccatgcccg cccctcccct gcagccgcgg gccctcaacc cagcctccag atggtccaag atccagattg tgacgaagca gacaggcaat gagtgtgtga cagccattga gattgtgcct gccacgccgg ctggcatgcg ccctgcggcc aacgtggccc gcaagttcgc cagcatcgct cgcaaccagg tgcgcaagaa gcggcagatg gcggcccggg agcgcaaagt gacacgaacg atctttgcca ttctgctagc cttcatcctc acctggacgc cctacaacgt catggtcctg gtgaacacct tctgccagag ctgcatccct gacacggtgt ggtccattgg ctactggctc tgctacgtca acagcaccat caaccctgcc tgctatgctc tgtgcaacgc cacctttaaa aagaccttcc ggcacctgct gctgtgccag tatcggaaca tcggcactgc caggtag		
193	3226	Muscarinic acetylcholin e Receptor M4	NP_000732.1	MANFTPVNGS SGNQSVRLVT SSSHNRYETV EMVFIATVTG SLSLVTVVGN ILVMLSIKVN RQLQTVNNYF LFSLACADLI IGAFSMNLYT VYIIKGYWPL GAVVCDLWLA LDYVVSNASV MNLLIISFDR YFCVTKPLTY PARRTTKMAG LMIAAAWVLS FVLWAPAILF WQFVVGKRTV PDNHCFIQFL SNPAVTFGTA IAAFYLPVVI MTVLYIHISL ASRSRVHKHR PEGPKEKKAK TLAFLKSPLM KQSVKKPRPG GRPGGLRNGK LEEAPPPALP PPPRPVADKD TSNESSSGSA TQNTKERPAT ELSTTEATTP AMPAPPLQPR ALNPASRWSK IQIVTKQTGN ECVTAIEIVP ATPAGMRPAA NVARKFASIA RNQVRKKRQM AARERKVTRT IFAILLAFIL TWTPYNVMVL VNTFCQSCIP DTVWSIGYWL CYVNSTINPA CYALCNATFK KTFRHLLLCQ YRNIGTAR	P	Homo sapiens
194	3227	Muscarinic Acetylcholin e Receptor M5	NM_012125	atggaagggg attcttacca caatgcaacc accgtcaatg gcaccccagt aaatcaccag cctttggaac gccacaggtt gtgggaagtc atcaccattg cagctgtgac tgctgtggta agcctgatca ccattgtggg caatgtcttg gtcatgatct ccttcaaagt caacagccag ctcaagacag ttaacaacta ttacctgctc agcttagcct gtgcagatct catcattgga atcttctcca tgaacctcta caccacctac atcctcatgg gacgctgggc tctcgggagt ctggcttgtg acctttggct tgcactggac tacgtggcca gcaacgcttc tgtcatgaac cttctggtga tcagttttga ccgttacttt tccatcacaa gacccttgac atatcgggcc aagcgtactc cgaaaagggc tggcatcatg attggcttgg cctggctgat ctccttcatc ctctgggccc cagcaatcct ctgctggcag tacttggttg ggaagcggac agttccactg gatgagtgcc agatccagtt tctctctgag cccaccatca cttttggcac tgccattgct gccttctaca tccctgtttc tgtcatgacc atcctctact gtcgaatcta ccgggaaaca gagaagcgaa ccaaggacct ggctgacctc cagggttctg actctgtgac caaagctgag aagagaaagc cagctcatag ggctctgttc agatcctgct tgcgctgtcc tcgacccacc ctggcccagc gggaaaggaa ccaggcctcc tggtcatcct cccgcaggag cacctccacc actgggaagc catcccaagc cactggccca agcgccaatt gggccaaagc tgagcagctc accacctgta gcagctaccc ttcctcagag gatgaggaca agcccgccac tgaccctgtc ctccaagtgg tctacaagag tcagggtaag gaaagcccag gggaagaatt cagtgctgaa gagactgagg aaacttttgt gaaagctgaa actgaaaaaa gtgactatga cacccccaaac taccttctgt ctccagcagc tgctcataga cccaagagtc agaaatgtgt ggcctataag ttccgattgg tggtaaaagc tgacgggaac caggagacca acaatggctg tcacaaggtg aaaatcatgc cctgcccctt cccagtggcc aaggaacctt caacgaaagg cctcaatccc aaccccagcc atcaaatgac caaacgaaag agagtggtcc tagtcaaaga gaggaaagca gcccagacac tgagtgccat tctcctggcc ttcatcatca catggacccc gtataacatc	A	Homo sapiens

				atggtcctgg tttctacctt ctgtgacaag tgtgtcccag tcaccctgtg gcacttgggc tattggttgt gctatgtcaa tagcactgtc aaccccatct gctatgccct ctgcaacaga accttcagga agacctttaa gatgctgctt ctctgccgat ggaaaaagaa aaaagtggaa gagaagttgt actggcaggg gaacagcaag ctaccctga		
195	3227	Muscarinic Acetylcholine Receptor M5	NP_036257.1	MEGDSYHNAT TVNGTPVNHQ PLERHRLWEV ITIAAVTAVV SLITIVGNVL VMISFKVNSQ LKTVNNYYLL SLACADLIIG IFSMNLYTTY ILMGRWALGS LACDLWLALD YVASNASVMN LLVISFDRYF SITRPLTYRA KRTPKRAGIM IGLAWLISFI LWAPAILCWQ YLVGKRTVPL DECQIQFLSE PTITFGTAIA AFYIPVSVMT ILYCRIYRET EKRTKDLADL QGSDSVTKAE KRKPAHRALF RSCLRCPRPT LAQRERNQAS WSSSRRSTST TGKPSQATGP SANWAKAEQL TTCSSYPSSE DEDKPATDPV LQVVYKSQGK ESPGEEFSAE ETEETFVKAE TEKSDYDTPN YLLSPAAAHR PKSQKCVAYK FRLVVKADGN QETNNGCHKV KIMPCPFPVA KEPSTKGLNP NPSHQMTKRK RVVLVKERKA AQTLSAILLA FIITWTPYNI MVLVSTFCDK CVPVTLWHLG YWLCYVNSTV NPICYALCNR TFRKTFKMLL LCRWKKKKVE EKLYWQGNSK LP	P	Homo sapiens
196	3378	Tachykinin Receptor 3	NM_001059	ctattgcagt atctttcagc ttccagtctt atctgaagac cccggcacca aagtgaccag gaggcagaga agaacttcag aggagtctcg tcttgggctg cccgtgggtg agtgggaggg tccgggactg cagaccggtg gcgatggcca ctctcccagc agcagaaacc tggatagacg ggggtggagg cgtgggtgca gacgccgtga acctgaccgc ctcgctagct gccggggcgg ccacgggggc agttgagact gggtggctgc aactgctgga ccaagctggc aacctctcct cctccccttc cgcgctggga ctgcctgtgg cttcccccgc gccctcccag ccctgggcca acctcaccaa ccagttcgtg cagccgtcct ggcgcatcgc gctctggtcc ctggcgtatg gtgtggtggt ggcagtggca gttttgggaa atctcatcgt catctggatc atcctggccc acaagcgcat gaggactgtc accaactact tccttgtgaa cctggctttc tccgacgcct ccatggccgc cttcaacacg ttggtcaatt tcatctacgc gcttcatagc gagtggtact ttggcgccaa ctactgccgc ttccagaact tctttcctat cacagctgtg ttcgccagca tctactccat gacggccatt gcggtggaca ggtatatggc tattattgat cccttgaaac ccagactgtc tgctacagca accaagattg tcattggaag tatttggatt ctagcatttc tacttgcctt ccctcagtgt ctttattcca aaaccaaagt catgccaggc cgtactctct gctttgtgca atggccagaa ggtcccaaac aacatttcac ttaccatatt atcgtcatta tactggtgta ctgtttccca ttgctcatca tgggtattac atacaccatt gttggaatta ctctctgggg aggagaaatc ccaggagata cctgtgacaa gtatcatgag cagctaaagg ccaaaagaaa ggttgtcaaa atgatgatta ttgttgtcat gacatttgct atctgctggc tgccctatca tatttacttc attctcactg caatctatca acaactaaat agatggaaat acatccagca ggtctacctg gctagctttt ggctggcaat gagctcaacc atgtacaatc ccatcatcta ctgctgtctg aataaaagat ttcgagctgg cttcaagaga gcatttcgct ggtgtccttt catcaaagtt tccagctatg atgagctaga gctcaagacc accaggtttc atccaaaccg gcaaagcagt atgtacaccg tgaccagaat ggagtccatg acagtcgtgt ttgaccccaa cgatgcagac accaccaggt ccagtcggaa gaaaagagca acgccaagag acccaagttt caatggctgc tctcgcagga attccaaatc tgcctccgcc acttcaagtt tcataagctc accctatacc tctgtggatg aatattctta attccatttc ctgaggtaaa agattagtgt gagaccatca tggtgccagt ctaggacccc attctcctat ttatcagtcc tgtcctatat accctctaga aacagaaagc aatttttagg cagctatggt caaattgaga	A	Homo sapiens

				aaggtagtgt ataaatgtga caaagacact aataacatgt tagcctccac ccaaaataaa atgggcttta aattt		
197	3378	Tachykinin Receptor 3	NP_001050.1	MATLPAAETW IDGGGGVGAD AVNLTASLAA GAATGAVETG WLQLLDQAGN LSSSPSALGL PVASPAPSQP WANLTNQFVQ PSWRIALWSL AYGVVVAVAV LGNLIVIWII LAHKRMRTVT NYFLVNLAFS DASMAAFNTL VNFIYALHSE WYFGANYCRF QNFFPITAVF ASIYSMTAIA VDRYMAIIDP LKPRLSATAT KIVIGSIWIL AFLLAFPQCL YSKTKVMPGR TLCFVQWPEG PKQHFTYHII VIILVYCFPL LIMGITYTIV GITLWGGEIP GDTCDKYHEQ LKAKRKVVKM MIIVVMTFAI CWLPYHIYFI LTAIYQQLNR WKYIQQVYLA SFWLAMSSTM YNPIIYCCLN KRFRAGFKRA FRWCPFIKVS SYDELELKTT RFHPNRQSSM YTVTRMESMT VVFDPNDADT TRSSRKKRAT PRDPSFNGCS RRNSKSASAT SSFISSPYTS VDEYS	P	Homo sapiens
198	3380	Neuromedin B Receptor	NM_002511	gtgctgtgag gcttgcccgc ggacagtaaa cttgcagggg cgagagggag ggacatcgat taaacctaaa tcgtgggcgt tcagtcctca gggcaccgag cgcgtgaaaa ctccagcgga ctctgctgga aaggagatca tgccctctaa gtctctttcc aacctctcgg tgaccaccgg cgcgaatgag agcggttccg ttcccgaggg gtgggaaagg gatttcctgc cggcctcgga cgggaccacc acggagttgg tgatccgctg tgtgatcccg tccctctacc tgctcatcat caccgtgggc ttgctgggca acatcatgct ggtgaagatc ttcatcacca acagcgccat gaggagcgtc cccaacatct tcatctctaa cctggcggcc ggggacttgc tgctgctgct cacctgcgtc ccggtggacg cctcgcgcta cttcttcgac gagtggatgt ttggcaaggt gggctgcaaa ctgatccctg tcatccagct cacttccgtg gggtttccg tgttcactct cactgccctc agcgccgaca ggtacagagc catcgttaac cccatggaca tgcagacgtc aggggcattg ctgcggacct gtgtgaaggc catgggtatc tgggtggtct ccgtgttgct ggcagttccc gaagcggtgt tttcagaagt ggctcgcatc agtagcttgg ataatagcag cttcacagca tgtatcccat accctcaaac agatgaatta catccaaaga ttcattcagt gctcattttc ttggtctatt tcctcatacc acttgctatt attagcattt attattatca tattgcaaag accttaatta aaagcgcaca caatcttcct ggagaataca atgaacatac caaaaaacag atggaaacac ggaaacgcct ggctaaaatt gtgcttgtct ttgtgggctg tttcatcttc tgttggtttc caaaccacat cctttacatg tatcggtctt tcaactataa tgagattgat ccatctctag gccacatgat tgtcacctta gttgcccggg ttctcagttt tggcaattct tgtgtcaacc catttgctct ttacctactc agtgaaagct tcaggaggca tttcaacagc caactctgct gtgggaggaa gtcctatcaa gagagaggaa ccagctacct actcagctct tcagcggtgc gtatgacatc tctgaaaagc aatgctaaga acatggtgac caattctgtt ttactaaatg ggcacagcat gaagcaggaa atggcaatgt gattttggcc attcaactca ctacctggag agaacttagt aa	A	Homo sapiens
199	3380	Neuromedin B Receptor	NP_002502.1	MPSKSLSNLS VTTGANESGS VPEGWERDFL PASDGTTTEL VIRCVIPSLY LLIITVGLLG NIMLVKIFIT NSAMRSVPNI FISNLAAGDL LLLLTCVPVD ASRYFFDEWM FGKVGCKLIP VIQLTSVGVS VFTLTALSAD RYRAIVNPMD MQTSGALLRT CVKAMGIWVV SVLLAVPEAV FSEVARISSL DNSSFTACIP YPQTDELHPK IHSVLIFLVY FLIPLAIISI YYYHIAKTLI KSAHNLPGEY NEHTKKQMET RKRLAKIVLV FVGCFIFCWF PNHILYMYRS FNYNEIDPSL GHMIVTLVAR VLSFGNSCVN PFALYLLSES FRRHFNSQLC CGRKSYQERG TSYLLSSSAV RMTSLKSNAK NMVTNSVLLN GHSMKQEMAM	P	Homo sapiens

200	3404	Neuropeptide Y Receptor Type 2	NM_000910	tatcctatcc ctatcctagc ttttaacctg agccagagct cactacacag gttcctggct A atcgagtctg aatctgcact actcaactta taaactgtct gcagacacct gttagggaaa ttgctgatca tgggcggcag gatctgaact cgctttacct tcttgtttgg agcacaggga ccgcccagct agaggagcac cagcgcactg cgccccagcc ctgggcgagg gtgcggagga tttgttctcg gtgcaatcct gctggcgctt ttccggggtt ctgcgcggat ccagctcccc atctctgctc ctacacacac aaaagaaaac aactctcgat tggaagttgt ggaatttttct cagcccctac gaggcgcggg gattctccag ccccggccct cctcccgcca gcctgaggtc tccttcgctc gcctgccttg ctagggaccg cagtccctca gccgcagctg ggtctgtccg ccccgccttt gccctcgcct tttcccgggg cggatttggt gaagtcggcc tcaagtccag gaggtctgtc ttcgccgggc cagctctcgc ggaactgggg ggtagagagc aaagggagag attcgtggaa gggaagggag gtaggggtgg cgcaaacgcc cagagtatca aacttggggg tggcacagta ggtgacagca gcagctgcag gtggtggctg gggacccgcg agggggcgcc cctctgggta gggtctggct gagcgggctt gcaagcccgg gaggcggctg agagaccctg gacactgttc ctgctccctc gccaccaaaa cttctcctcc agtcccctcc cctgcaggac catcgcccgc agcctctgca cctgttttct tgtgtttaag ggtggggttt gccccccctcc ccacgctccc atctctgatc ctcccacctt cacccgccca ccccgcgagt gagtgcggtg cccaggcgcg cttggcctga gaggtcggca gcagacccgg cagcgccaac cgcccagccg ctctgactgc tccggctgcc cgcccgcgcg gcgcgggctg tcctggaccc taggagggga cggaaccgga cttgcctttg ggcaccttcc agggccctct ccaggtcggc tggctaatca tcggacagac ggactgcaca catcttgttt ccgcgtctcc gcaaaaacgc gaggtccagg tcagttgtag actcttgtgc tggttgcagg ccaagtggac ctgtactgaa aatgggtcca ataggtgcag aggctgatga gaaccagaca gtggaagaaa tgaaggtgga acaatacggg ccacaaacaa ctcctagagg tgaactggtc cctgaccctg agccagagct tatagatagt accaagctga ttgaggtaca agttgttctc atattggcct actgctccat catcttgctt ggggtaattg gcaactcctt ggtgatccat gtggtgatca aattcaagag catgcgcaca gtaaccaact ttttcattgc caatctggct gtggcagatc ttttggtgaa cactctgtgt ctaccgttca ctcttaccta taccttaatg gggagtgga aaatgggtcc tgtcctgtgc cacctggtgc cctatgccca gggcctggca gtacaagtat ccacaatcac cttgacagta attgccctgg accggcacag gtgcatcgtc taccacctag agagcaagat ctccaagcga atcagcttcc tgattattgg cttggcctgg ggcatcagtg ccctgctggc aagtcccctg gccatcttcc gggagtattc gctgattgag atcatcccgg actttgagat tgtggcctgt actgaaaagt ggcctggcga ggagaagagc atctatggca ctgtctatag tctttcttcc ttgttgatct tgtatgtttt gcctctgggc attatatcat tttcctacac tcgcatttgg agtaaattga agaaccatgt cagtcctgga gctgcaaatg accactacca tcagcgaagg caaaaaacca ccaaaatgct ggtgtgtgtg gtggtggtgt ttgcggtcag ctggctgcct ctccatgcct tccagcttgc cgttgacatt gacagccagg tcctggacct gaaggagtac aaactcatct tcacagtgtt ccacatcatc gccatgtgct ccacttttgc caatcccctt ctctatggct ggatgaacag caactacaga aaggctttcc tctcggcctt ccgctgtgag cagcggttgg atgccattca ctctgaggtg tccgtgacat tcaaggctaa aaagaacctg gaggtcagaa agaacagtgg ccccaatgac tctttcacag aggctaccaa tgtctaagga agctgtggtg tgaaaatgta tggatgaatt ctgaccagag ctatgaatct ggttgatggc	Homo sapiens

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201	3404	Neuropeptide Y Receptor Type 2	NP_000901.1	MGPIGAEADE NQTVEEMKVE QYGPQTTPRG ELVPDPEPEL IDSTKLIEVQ VVLILAYCSI ILLGVIGNSL VIHVVIKFKS MRTVTNFFIA NLAVADLLVN TLCLPFTLTY TLMGEWKMGP VLCHLVPYAQ GLAVQVSTIT LTVIALDRHR CIVYHLESKI SKRISFLIIG LAWGISALLA SPLAIFREYS LIEIIPDFEI VACTEKWPGE EKSIYGTVYS LSSLLILYVL PLGIISFSYT RIWSKLKNHV SPGAANDHYH QRRQKTTKML VCVVVVFAVS WLPLHAFQLA VDIDSQVLDL KEYKLIFTVF HIIAMCSTFA NPLLYGWMNS NYRKAFLSAF RCEQRLDAIH SEVSVTFKAK KNLEVRKNSG PNDSFTEATN V	P	Homo sapiens

202	3405	Neuropeptide Y Receptor Type 4	NM_005972	atgaacacct ctcacctcct ggccttgctg ctcccaaaat ctccacaagg tgaaaacaga agcaaacccc tgggcacccc atacaacttc tctgaacatt gccaggattc cgtggacgtg atggtcttca tcgtcacttc ctacagcatt gagactgtcg tggggtcct gggtaacctc tgcctgatgt gtgtgactgt gaggcagaag gagaaagcca acgtgaccaa cctgcttatc gccaacctgg ccttctctga cttcctcatg tgcctcctct gccagccgct gaccgccgtc tacaccatca tggactactg gatctttgga gagaccctct gcaagatgtc ggccttcatc cagtgcatgt cggtgacggt ctccatcctc tcgctcgtcc tcgtggccct ggagaggcat cagctcatca tcaacccaac aggctggaag cccagcatct cacaggccta cctggggatt gtgctcatct gggtcattgc ctgtgtcctc tccctgccct tcctggccaa cagcatcctg gagaatgtct tccacaagaa ccactccaag gctctggagt tcctggcaga taaggtggtc tgtaccgagt cctggccact ggctcaccac cgcaccatct acaccacctt cctgctcctc ttccagtact gcctccccact gggcttcatc ctggtctgtt atgcacgcat ctaccggcgc ctgcagaggc aggggcgcgt gtttcacaag ggcacctaca gcttgcgagc tgggcacatg aagcaggtca atgtggtgct ggtggtgatg gtggtggcct ttgccgtgct ctggctgcct ctgcatgtgt tcaacagcct ggaagactgg caccatgagg ccatccccat ctgccacggg aacctcatct tcttagtgtg ccacttgctt gccatggcct ccacctgcgt caacccattc atctatggct ttctcaacac caacttcaag aaggagatca aggccctggt gctgacttgc cagcagagcg cccccctgga ggagtcggag catctgcccc tgtccacagt acatacggaa gtctccaaag ggtccctgag gctaagtggc aggtccaatc ccatttaa	A	Homo sapiens
203	3405	Neuropeptide Y Receptor Type 4	NP_005963.1	MNTSHLLALL LPKSPQGENR SKPLGTPYNF SEHCQDSVDV MVFIVTSYSI ETVVGVLGNL CLMCVTVRQK EKANVTNLLI ANLAFSDFLM CLLCQPLTAV YTIMDYWIFG ETLCKMSAFI QCMSVTVSIL SLVLVALERH QLIINPTGWK PSISQAYLGI VLIWVIACVL SLPFLANSIL ENVFHKNHSK ALEFLADKVV CTESWPLAHH RTIYTTFLLL FQYCLPLGFI LVCYARIYRR LQRQGRVFHK GTYSLRAGHM KQVNVVLVVM VVAFAVLWLP LHVFNSLEDW HHEAIPICHG NLIFLVCHLL AMASTCVNPF IYGFLNTNFK KEIKALVLTC QQSAPLEESE HLPLSTVHTE VSKGSLRLSG RSNPI	P	Homo sapiens
204	3406	Neuropeptide Y Receptor Type 5	NM_006174	gaaaggctat cggtaacaac tgacctgcca caaagttaga agaaaggatt gattcaagaa agactataat atggatttag agctcgacga gtattataac aagacacttg ccacagagaa taatactgct gccactcgga attctgattt cccagtctgg gatgactata aaagcagtgt agatgactta cagtattttc tgattgggct ctatacattt gtaagtcttc ttggctttat ggggaatcta cttattttaa tggctctcat gaaaaagcgt aatcagaaga ctacggtaaa cttcctcata ggcaatctgg ccttttctga tatcttggtt gtgctgtttt gctcaccttt cacactgacg tctgtcttgc tggatcagtg gatgtttggc aaagtcatgt gccatattat gccttttctt caatgtgtgt cagttttggt ttcaacttta attttaatat caattgccat tgtcaggtat catatgataa aacatcccat atctaataat ttaacagcaa accatggcta ctttctgata gctactgtct ggacactagg ttttgccatc tgttctcccc ttccagtgtt tcacagtctt gtggaacttc aagaaacatt tggttcagca ttgctgagca gcaggtattt atgtgttgag tcatggccat ctgattcata cagaattgcc tttactatct ctttattgct agttcagtat attctgccct tagtttgtct tactgtaagt catacaagtg tctgcagaag tataagctgt ggattgtcca acaaagaaaa cagacttgaa gaaaatgaga tgatcaactt aactcttcat ccatccaaaa agagtgggcc tcaggtgaaa ctctctggca gccataaatg	A	Homo sapiens

				gagttattca ttcatcaaaa aacacagaag aagatatagc aagaagacag catgtgtgtt acctgctcca gaaagacctt ctcaagagaa ccactccaga atacttccag aaaactttgg ctctgtaaga agtcagctct cttcatccag taagttcata ccaggggtcc ccacttgctt tgagataaaa cctgaagaaa attcagatgt tcatgaattg agagtaaaac gttctgttac aagaataaaa aagagatctc gaagtgtttt ctacagactg accatactga tattagtatt tgctgttagt tggatgccac tacacctttt ccatgtggta actgatttta atgacaatct tatttcaaat aggcatttca agttggtgta ttgcatttgt catttgttgg gcatgatgtc ctgttgtctt aatccaattc tatatgggtt tcttaataat gggattaaag ctgatttagt gtcccttata cactgtcttc atatgtaata attctcactg ttt		
205	3406	Neuropeptide Y Receptor Type 5	NP_006165.1	MDLELDEYYN KTLATENNTA ATRNSDFPVW DDYKSSVDDL QYFLIGLYTF VSLLGFMGNL LILMALMKKR NQKTTVNFLI GNLAFSDILV VLFCSPFTLT SVLLDQWMFG KVMCHIMPFL QCVSVLVSTL ILISIAIVRY HMIKHPISNN LTANHGYFLI ATVWTLGFAI CSPLPVFHSL VELQETFGSA LLSSRYLCVE SWPSDSYRIA FTISLLLVQY ILPLVCLTVS HTSVCRSISC GLSNKENRLE ENEMINLTLH PSKKSGPQVK LSGSHKWSYS FIKKHRRRYS KKTACVLPAP ERPSQENHSR ILPENFGSVR SQLSSSSKFI PGVPTCFEIK PEENSDVHEL RVKRSVTRIK KRSRSVFYRL TILILVFAVS WMPLHLFHVV TDFNDNLISN RHFKLVYCIC HLLGMMSCCL NPILYGFLNN GIKADLVSLI HCLHM	P	Homo sapiens
206	3408	Neurotensin Receptor Type 1	NM_002531	tcaagctcgc cccgcgcagc ccgagccggg ctgggcgctg tcctcggggg cctggggaac cgcgcggttt ggagatcgga ggcacctgga acccgtggca agcgccgagc cgggagacag cccgaggaac cacgggttct ggagctagga gccggaagct gggagtccgg aggagagcgg agcccggagc ccggagcccg gggcggcgcg tctgggtctg gcgcttcccg actggacggc gcgcccgctg gtcttcgcca cgcgccctcc cctgggctcg cgttcatcgg tccccgcctg agacgcgccc actcctgccc ggacttccag ccccggaggc gccggacaga gccgcggact ccagcgccca ccatgcgcct caacagctcc gcgccgggaa ccccgggcac gccggccgcc gaccccttcc agcgggcgca ggccggactg gaggaggcgc tgctggcccc gggcttcggc aacgcttcgg gcaacgcgtc ggagcgcgtc ctggcggcac ccagcagcga gctggacgtg aacaccgaca tctactccaa agtgctggtg accgccgtgt acctggcgct cttcgtggtg ggcacggtgg gcaacacggt gacggcgttc acgctggcgc ggaagaagtc gctgcagagc ctgcagagca cggtgcatta ccacctgggc agcctggcgc tgtccgacct gctcaccctg ctgctggcca tgcccgtgga gctgtacaac ttcatctggg tgcaccaccc ctgggccttc ggcgacgccg gctgccgcgg ctactacttc ctgcgcgacg cctgcaccta cgccacggcc ctcaacgtgg ccagcctgag tgtggagcgc tacctggcca tctgccaccc cttcaaggcc aagaccctca tgtcccgaag ccgcaccaag aagttcatca gcgccatctg gctcgcctcg gccctgctga cggtgcctat gctgttcacc atgggcgagc agaaccgcag cgccgacggc cagcacgccg gcggcctggt gtgcaccccc accatccaca ctgccaccgt caaggtcgtc atacaggtca acaccttcat gtccttcata ttccccatgg tggtcatctc ggtcctgaac accatcatcg ccaacaagct gaccgtcatg gtacgccagg cggccgagca gggccaagtg tgcacggtcg gggcgagca cagcacattc agcatggcca tcgagcctgg cagggtccag gccctgcggc acggcgtgcg cgtcctacgt gcagtggtca tcgcctttgt ggtctgctgg ctgccctacc acgtgcggcg cctcatgttc tgctacatct cggatgagca gtggactccg ttcctctatg acttctacca ctacttctac atggtgacca acgcactctt ctacgtcagc	A	Homo sapiens

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ctcctatctg tgcacttacc gtaggtaggg acacgtgtcc atgcaccaca gacacaccca
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				cgacacctga tctcgtatca ctagcttgcg gccaggtcat gatgtggccc cggaagctgg ccctgcgtgc catgagtgcg tcggtcatgg agtccggagc ccctgagccg gcccctggtg acggcacagc cctcacagct caaacgccca cccccactcc caccatctgc aggtggtgaa aacaaacccc gtgtatctct caataaaggt ggccgaaggg cctcgatgtg g		
207	3408	Neurotensin Receptor Type 1	NP_002522.1	MRLNSSAPGT PGTPAADPFQ RAQAGLEEAL LAPGFGNASG NASERVLAAP SSELDVNTDI YSKVLVTAVY LALFVVGTVG NTVTAFTLAR KKSLQSLQST VHYHLGSLAL SDLLTLLLAM PVELYNFIWV HHPWAFGDAG CRGYYFLRDA CTYATALNVA SLSVERYLAI CHPFKAKTLM SRSRTKKFIS AIWLASALLT VPMLFTMGEQ NRSADGQHAG GLVCTPTIHT ATVKVVIQVN TFMSFIFPMV VISVLNTIIA NKLTVMVRQA AEQGQVCTVG GEHSTFSMAI EPGRVQALRH GVRVLRAVVI AFVVCWLPYH VRRLMFCYIS DEQWTPFLYD FYHYFYMVTN ALFYVSSTIN PILYNLVSAN FRHIFLATLA CLCPVWRRRR KRPAFSRKAD SVSSNHTLSS NATRETLY	P	Homo sapiens
208	3452	Opiate Receptor-Like 1 (OPRL1)	NM_000913	cctgctctgc acctgtcgtc gactgccagc cggctgaggg cggggtctc cacggtggtc ccagctccca aggaggttgc agaagtaccg tacagagtgg atttgcaggg cagtggcatg gagcccctct tccccgcgcc gttctgggag gttatctacg gcagccacct tcagggcaac ctgtccctcc tgagccccaa ccacagtctg ctgcccccgc atctgctgct caatgccagc cacggcgcct tcctgcccct cgggctcaag gtcaccatcg tggggctcta cctggccgtg tgtgtcggag ggctcctggg gaactgcctt gtcatgtacg tcatcctcag gcacaccaaa atgaagacag ccaccaatat ttacatcttt aacctggccc tggccgacac tctggtcctg ctgacgctgc ccttccaggg cacggacatc ctcctgggct tctggccgtt tgggaatgcg ctgtgcaaga cagtcattgc cattgactac tacaacatgt tcaccagcac cttcacccta actgccatga gtgtggatcg ctatgtagcc atctgccacc ccatccgtgc cctcgacgtc cgcacgtcca gcaaagccca ggctgtcaat gtggccatct gggccctggc ctctgttgtc ggtgttcccg ttgccatcat gggctcggca caggtcgagg atgaagagat cgagtgcctg gtggagatcc ctacccctca ggattactgg ggcccggtgt ttgccatctg catcttcctc ttctccttca tcgtccccgt gctcgtcatc tctgtctgct acagcctcat gatccggcgg ctccgtggag tccgcctgct ctcgggctcc cgagagaagg accggaacct gcggcgcatc actcggctgg tgctggtggt agtggctgtg ttcgtgggct gctggacgcc tgtccaggtc ttcgtgctgg cccaagggct gggggttcag ccgagcagcg agactgccgt ggccattctg cgcttctgca cggccctggg ctacgtcaac agctgcctca accccatcct ctacgccttc ctggatgaga acttcaaggc ctgcttccgc aagttctgct gtgcatctgc cctgcgccgg gacgtgcagg tgtctgaccg cgtgcgcagc attgccaagg acgtggccct ggcctgcaag acctctgaga cggtaccgcg gcccgcatga ctaggcgtgg acctgcccat ggtgcctgtc agcccgcaga gcccatctac gcccaacaca gagctcacac aggtcactgc tctctaggcg gacacaccct gggccctgag catccagagc ctgggatggg cttttccctg tgggccaggg atgctcggtc ccagaggagg acctagtgac atcatgggac aggtcaaagc attagggcca cctccatggc cccagacaga ctaaagctgc cctcctggtg cagggccgag ggacacaag gacctacctg gaagcagctg acatgctggt ggacggccgt tactggagcc cgtgcccctc cctccccgtg cttcatgtga ctcttggcct ctctgctgct gcgttggcag aaccctgggt gggcaggcac ccggaggagg agcagcagct gtgtcatcct gtgcccccca tgtgctgtgt gctgtttgca tggcagggct ccagctgcct tcagccctgt gacgtctcct cagggcagct ggacaggctt ggcacggccc gggaagtgca gcaggcagct ttctttgggg gtgggacttg	A	Homo sapiens

				ccctgagctt ggagctgcca cctggaggac ttgcctgttc cgactccacc tgtgcagccg gggccacccc aggagaaagt gtccaggtgg gggctggcag tccctggctg cagaccccga gctggccctc ggaccgcacc tctgaaggtt ttctgtgtgc tgcacggtgc aggcctcatc cctgactgca gcttgactct gggcccaacc cccatttccc ttcaggagac cagcgagagg ccctggccat ccctccagcg gtgcaatgaa ctatatgctg tggaccgtca acccagccct gcttctcagt gtggggcagg tgtctcagga cgaaggcgcc gcgtgaccac atgggcagct ctgttcacaa agtggaggcc tcgttttcct ggtcttgact gctctgtttg ggtgggagaa gattctctgg gggtccccac atcctcccaa ggctcccctc acagcctctc ctttgcttga agccagaggt cagtggccgt gctgtgttgc ggggaagctg tgtggaagga gaagctggtg gccacagcag agtcctgctc tggggacgcc tgcttcattt acaagcctca agatggctct gtgtagggcc tgagcttgct gcccaacggg aggatggctt cacagcagag ccagcatgag gggtggggcc tggcagggct tgcttgagcc aaactgcaaa ggctgtggtg gctgtgagga cactgcgggg gttg		
209	3452	Opiate Receptor-Like 1 (OPRL1)	NP_000904.1	MEPLFPAPFW EVIYGSHLQG NLSLLSPNHS LLPPHLLLNA SHGAFLPLGL KVTIVGLYLA VCVGGLLGNC LVMYVILRHT KMKTATNIYI FNLALADTLV LLTLPFQGTD ILLGFWPFGN ALCKTVIAID YYNMFTSTFT LTAMSVDRYV AICHPIRALD VRTSSKAQAV NVAIWALASV VGVPVAIMGS AQVEDEEIEC LVEIPTPQDY WGPVFAICIF LFSFIVPVLV ISVCYSLMIR RLRGVRLLSG SREKDRNLRR ITRLVLVVVA VFVGCWTPVQ VFVLAQGLGV QPSSETAVAI LRFCTALGYV NSCLNPILYA FLDENFKACF RKFCCASALR RDVQVSDRVR SIAKDVALAC KTSETVPRPA	P	Homo sapiens
210	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NM_000273	atgacccagg caggccggcg gggtcctggc acacccgagc cgcgtccgcg aacacagccc atggcctccc cgcgcctagg gaccttctgc tgccccacgc gggacgcagc cacgcagctc gtgctgagct tccagccgcg ggccttccac gcgctctgcc tgggcagcgg cgggctccgc ttggcgctgg gccttctgca gctgctgccc ggccgccggc ccgcgggccc cgggtccccc gcgacgtccc cgccggcctc ggtccgcatc ctgcgcgctg ccgctgcctg cgaccttctc ggctgcctgg gtatggtgat ccggtccacc gtgtggttag gattcccaaa ttttgttgac agcgtctcgg atatgaacca cacggaaatt tggcctgctg ctttctgcgt ggggagtgcg atgtggatcc agctgttgta cagtgcctgc ttctggtggc tgttttgcta tgcagtggat gcttatctgg tgatccggag atcggcagga ctgagcacca tcctgctgta tcacatcatg gcgtggggcc tggccaccct gctctgtgtg gagggagccg ccatgctcta ctacccttcc gtgtccaggt gtgagcgggg cctggaccac gccatccccc actatgtcac catgtacctg cccctgctgc tggttctcgt ggcgaacccc atcctgttcc aaaagacagt gactgcagtg gcctctttac ttaaaggaag acaaggcatt tacacggaga acgagaggag gatgggagcc gtgatcaaga tccgattttt caaaatcatg ctggttttaa ttatttgttg gttgtcgaat atcatcaatg aaagcctttt attctatctt gagatgcaaa cagatatcaa tggaggttct ttgaaacctg tcagaactgc agccaagacc acatggttta ttatgggaat cctgaatcca gcccagggat ttctcttgtc tttggccttc tacggctgga caggatgcag cctgggtttt cagtctccca ggaaggagat ccagtgggaa tcactgacca cctcggctgc tgaggggggct cacccatccc cactgatgcc ccatgaaaac cctgcttccg ggaaggtgtc tcaagtgggt gggcagactt ctgacgaagc cctgagcatg ctgtctgaag gttctgatgc cagcacaatt gaaattcaca ctgcaagtga atcctgcaac aaaaatgagg gtgaccctgc tctcccaacc	A	Homo sapiens

				catggagacc tatgaagggg atgtgctggg ggtccagacc ccatattcct cagactcaac aattcttgtt ctttagaact gtgttctcac cttcccaaca ctgcactgcc gaagtgtagc ggcccccaaa ccttgctctc atcaccagct agagcttctt cccgaagggc ctttaggata ggagaaaggg ttcatgcaca cacgtgtgag aatggaagag ccccctccag accactctac agctgctcta gccttagttg ccactaggaa gttttctgag gctggctgta aagtaagtgt aaggtccaca tccttgggga agtagttaaa taaaatagtt atgactg		
211	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NP_000264.1	MTQAGRRGPG TPEPRPRTQP MASPRLGTFC CPTRDAATQL VLSFQPRAFH ALCLGSGGLR LALGLLQLLP GRRPAGPGSP ATSPPASVRI LRAAAACDLL GCLGMVIRST VWLGFPNFVD SVSDMNHTEI WPAAFCVGSA MWIQLLYSAC FWWLFCYAVD AYLVIRRSAG LSTILLYHIM AWGLATLLCV EGAAMLYYPS VSRCERGLDH AIPHYVTMYL PLLLVLVANP ILFQKTVTAV ASLLKGRQGI YTENERRMGA VIKIRFFKIM LVLIICWLSN IINESLLFYL EMQTDINGGS LKPVRTAAKT TWFIMGILNP AQGFLLSLAF YGWTGCSLGF QSPRKEIQWE SLTTSAAEGA HPSPLMPHEN PASGKVSQVG GQTSDEALSM LSEGSDASTI EIHTASESCN KNEGDPALPT HGDL	P	Homo sapiens
212	3544	UDP-glucose Receptor (KIAA0001)	NM_014879	gaacagtgtt accttggagc ctacaatgag aggtatttca aaatgagtga agcatgactc tcacagatga aggcctagac gcaggatctt taatggaaaa acacttgggc cacttcaaga cgacaaacgc tcactgggca aaacaccttc actgaaaaga gacctcatat tatgcaaaaa aaatcttaag aggcctctgc cttcagaagt tacaagatga tcaattcaac ctccacacag cctccagatg aatcctgctc tcagaacctc ctgatcactc agcagatcat tcctgtgctg tactgtatgg tcttcattgc gggaatccta ctcaatggag tgtcaggatg gatattcttt tacgtgccca gctctaagag tttcatcatc tatctcaaga acattgttat tgctgacttt gtgatgagcc tgacttttcc tttcaagatc cttggtgact caggccttgg tccctggcag ctgaacgtgt ttgtgtgcag ggtctctgcc gtgctcttct acgtcaacat gtacgtcagc attgtgttct ttgggctcat cagctttgac aggtattata aaattgtaaa gcctctttgg acttctttca tccagtcagt gagttacagc aaacttctgt cagtgatagt atggatgctc atgctcctcc ttgctgttcc aaatattatt ctcaccaacc agagtgttag ggaggttaca caaataaaat gtatagaact gaaaagtgaa ctgggacgga agtggcacaa agcatcaaac tacatcttcg tggccatctt ctggattgtg tttcttttgt taatcgtttt ctatactgct atcacaaaga aaatctttaa gtcccacctt aagtcaagtc ggaattccac ttcggtcaaa aagaaatcta gccgcaacat attcagcatc gtgtttgtgt tttttgtctg ttttgtacct taccatattg ccagaatccc ctacacaaag agtcagaccg aagctcatta cagctgccag tcaaaagaaa tcttgcggta tatgaaagaa ttcactctgc tactatctgc tgcaaatgta tgcttggacc ctattattta tttctttcta tgccagccgt ttagggaaat cttatgtaag aaattgcaca ttccattaaa agctcagaat gacctagaca tttccagaat caaaagagga aatacaacac ttgaaagcac agatactttg tgagttccta ccctcttcca aagaaagacc acgtgtgcat gttgtcatct tcaattacat aacagaaatc aataagatat gtgccctcat cataaatatc atctctagca ctgccatcca atttagttca ataaaattca aatataagtt tccatgcttt tttgtaacat caaagaaaac atacccatca gtaatttctc taatactgac ctttctattc tctattaata aaaaattaat acatacaatt attcaattct attatattaa aataagttaa agtttataac cactagtctg gtcagttaat gtagaaattt aaatagtaaa taaaacacaa cataatcaaa gacaactcac tcaggcatct tctttctcta aataccagaa	A	Homo sapiens

				tctagtatgt aattgttttc aacactgtcc ttaaagacta acttgaaagc aggcacagtt		
				tgatgaaggg ctagagagct gtttgcaata aaaagtcagg tttttttcct gatttgaaga		
				agcaggaaaa gctgacaccc agacaatcac ttaagaaacc ccttattgat gtatttcatg		
				gcactgcaaa ggaagaggaa tattaattgt atacttagca agaaaatttt tttttctga		
				tagcactttg aggatattag atacatgcta aatatgtttt ctacaaagac ttacgtcatt		
				taatgagcct ggggttctgg tgttagaata tttttaagta ggctttactg agagaaacta		
				aatattggca tacgttatca gcaacttccc ctgttcaata gtatgggaaa aataagatga		
				ctgggaaaaa gacacaccca caccgtagaa catatattaa tctactggcg aatgggaaag		
				gagaccattt tcttagaaag caaataaact tgattttttt aaatctaaaa tttacattaa		
				tgagtgcaaa ataacacata aaatgaaaat tcacacatca catttttctg gaaaacagac		
				ggattttact tctggagaca tggcatacgg ttactgactt atgagctacc aaaactaaat		
				tctttctctg ctattaactg gctagaagac attcatctat ttttcaaatg ttctttcaaa		
				acatttttat aagtaatgtt tgtatctatt tcatgcttta ctgtctatat actaataaag		
				aaatgtttta atactg		
213	3544	UDP-glucose Receptor (KIAA0001)	NP_055694.1	MINSTSTQPP DESCSQNLLI TQQIIPVLYC MVFIAGILLN GVSGWIFFYV PSSKSFIIYL	P	Homo sapiens
				KNIVIADFVM SLTFPFKILG DSGLGPWQLN VFVCRVSAVL FYVNMYVSIV FFGLISFDRY		
				YKIVKPLWTS FIQSVSYSKL LSVIVWMLML LLAVPNIILT NQSVREVTQI KCIELKSELG		
				RKWHKASNYI FVAIFWIVFL LLIVFYTAIT KKIFKSHLKS SRNSTSVKKK SSRNIFSIVF		
				VFFVCFVPYH IARIPYTKSQ TEAHYSCQSK EILRYMKEFT LLLSAANVCL DPIIYFFLCQ		
				PFREILCKKL HIPLKAQNDL DISRIKRGNT TLESTDTL		
214	3582	Oxytocin Receptor	NM_000916	tgttaaggct ctgggaccaa cgctgggcga accagctccg ctccggaggg gtctgcgcgg	A	Homo sapiens
				ctggcctcgc ccgcccccta gcggacccgt gcgatagtgc agcctcagcc ccaggcacag		
				cgccgcatcc agacgccgtc cgcgcgcgca gcctgggagg cgctcctcgc tcgcctcctg		
				tacccatcca gcgaccagcc aggctgcggc gaggggattc caaccgaggc tccagtgaga		
				gacctcagct tagcatcaca ttaggtgcag ccggcaggcc atcccaactc gggccgggag		
				cgcacgcgtc actggggccg tcagtcgccg tgcaacttcc ccggggggag tcaactttag		
				gttcgcctgc ggactcggtg cagtggaagc cgctgaacat cccgaggaac tggcacgctg		
				ggggctctgg gcttgtggcc ggtagaggat tcccgctcat ttgcagtggc tcagaggagg		
				gtggacccag cagatccgtc cgtggagtct ccaggagtgg agccccgggc gcccctacac		
				cctccgacac gccggatccg gcccagccgc gccaagccgt aaagggctcg aaggccgggg		
				cgcaccgctg ccgccagggt catggagggc gcgctcgcag ccaactggag cgccgaggca		
				gccaacgcca gcgccgcgcc gccgggggcc gagggcaacc gcaccgccgg acccccgcgg		
				cgcaacgagg ccctggcgcg cgtggaggtg gcggtgctgt gtctcatcct gctcctggcg		
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				ctgccgcagt tgctgtggga catcaccttc cgcttctacg ggcccgacct gctgtgccgc		
				ctggtcaagt acttgcaggt ggtgggcatg ttcgcctcca cctacctgct gctgctcatg		
				tccctggacc gctgcctggc catctgccag ccgctgcgct cgctgcgccg ccgcaccgac		
				cgcctggcag tgctcgccac gtggctcggc tgcctggtgg ccagcgcgcc gcaggtgcac		
				atcttctctc tgcgcgaggt ggctgacggc gtcttcgact gctgggccgt cttcatccag		
				ccctggggac ccaaggccta catcacatgg atcacgctag ctgtctacat cgtgccggtc		

atcgtgctcg ctacctgcta cggccttatc agcttcaaga tctggcagaa cttgcggctc
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ggcttcagtg gggtggagag tggcctccat gatggaagat gataggggac tcagccatca
gacaacaccc tggcctccta cacgtacttc taccaccctg aacccactgc tgccctgggc
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tcattctggg atattgtgaa aagcggtaaa tataggattg gtgaccaatt gggtcaggaa
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tggggaccag cttgtcagag ggtagcccta agagaagggg attaccttgt aagaccatct
ggcgcagtgg acctattaga acttgggtta aaaatgttta agaagctaat gtttaagaag
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tgcagatgac acagttttgt atatagaaaa tcctaaggaa ctcacacaca cacacacaca
cacacacgca cacagctatt agaactaata agcaagttcc gcaaggtttc aagatacaag
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actgacatgc agattcagtg caatccttat gaaaatcata gctggctttt ttacagaaat
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aatcagctca gtgtgttact ggtttaagga tagacatacg gagcagaata aagagtacag
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agagaaagga gagtcttttc aacaaatggc accgagacaa tgatatgcaa gtgcaaaaga
atgaggttgg acctttactc acactatgtg caaaaatcaa ctcaaaacgc atccaagatc
taaatataag agctgaaact ataaaatctt agaaagaaac ataggcatag atctttgtaa
ccttgaatta ggcagtggtt tcttagatat gataccaaag acacaagcaa ccaatggaaa
aataggtaaa ttggacttaa tcaagatttg aagcttttgt gattgaaaag accctatcaa
gaaggtgaaa agataacctg cagaatggga gaaaatattt gcgagtcata tatatgataa
ggggcttgta tctggaatat ataaataact cttataacac aacaataagg agaaaaataa
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tggctactaa gcacatgaaa aatactcaac attattattc attagggaaa tgcaagtcaa
aatcacaatg agattccagt ttacaatcac taggatggct acaataaaaa gatggacaag

				aacgagtgtc ggtgaggatg tagagaaact ggtagaaatt taaattgttg gtgggaatgt aaatggtgca cctgctttga aaaacagttt ggcagtacct caaaaagtta aacgtagagt gaccatatga cccaggaatg ccactcctag gtatttaccc aagagaaatg aaaacgtaca tacacacaaa aacttgtaca ccaatgttca tagcaacatt atttgtaata gccaaaaagt ggaaacaacc caaatgtcta ccaactgatg aatgggaaat aaaatgtggt ctgtccacgc aatggaacat tattagactc taaaaagaaa tgaagtactc acacatgcca caacatggat gagccttgaa aacttgctaa gtgaaagaag ccaggtgcaa aagcccacat attgtctgac tgcattgaaa tgcaatgtct aaaatggacg aatctatata gagtgaatat agattagcgt ttgccagggc ctggaggctg tgagagatga ggcatgacta ctaagggttt ggggtttctt tttcgggtga tgaaaatgtt cgaaattagt ggtgattgtg cacgattttg agaatgtact aaaaaccaat gaactttaaa aaataaaaat aaacaaa		
215	3582	Oxytocin Receptor	NP_000907.1	MEGALAANWS AEAANASAAP PGAEGNRTAG PPRRNEALAR VEVAVLCLIL LLALSGNACV LLALRTTRQK HSRLFFFMKH LSIADLVVAV FQVLPQLLWD ITFRFYGPDL LCRLVKYLQV VGMFASTYLL LLMSLDRCLA ICQPLRSLRR RTDRLAVLAT WLGCLVASAP QVHIFSLREV ADGVFDCWAV FIQPWGPKAY ITWITLAVYI VPVIVLATCY GLISFKIWQN LRLKTAAAAA AEAPEGAAAG DGGRVALARV SSVKLISKAK IRTVKMTFII VLAFIVCWTP FFFVQMWSVW DANAPKEASA FIIVMLLASL NSCCNPWIYM LFTGHLFHEL VQRFLCCSAS YLKGRRLGET SASKKSNSSS FVLSHRSSSQ RSCSQPSTA	P	Homo sapiens
216	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	NM_002564	cggcacgagg caccccgaga ggagaagcgc agcgcagtgg cgagaggagc cccttgtggc agcagcacta cctgcccaga aaaatgctgg aggctgggcg tggccccagg cctggggacc tgtttttcct gtttcccgca gagttccctg cagcccggtc caggtccagg cgtgtgcatt catgagtgag gaacccgtgc aggcgctgag catcctgacc tggagagcag gggctggtca gggcgatggc agcagacctg ggcccctgga atgacaccat caatggcacc tgggatgggg atgagctggg ctacaggtgc cgcttcaacg aggacttcaa gtacgtgctg ctgcctgtgt cctacggcgt ggtgtgcgtg cttgggctgt gtctgaacgc cgtggcgctc tacatcttct tgtgccgcct caagacctgg aatgcgtcca ccacatatat gttccacctg gctgtgtctg atgcactgta tgcggcctcc ctgccgctgc tggtctatta ctacgcccgc ggcgaccact ggcccttcag cacggtgctc tgcaagctgg tgcgcttcct cttctacacc aacctttact gcagcatcct cttcctcacc tgcatcagcg tgcaccggtg tctgggcgtc ttacgacctc tgcgctccct gcgctggggc cgggcccgct acgctcgccg ggtggccggg gccgtgtggg tgttggtgct ggcctgccag gcccccgtgc tctactttgt caccaccagc gcgcgcgggg gccgcgtaac ctgccacgac acctcggcac ccgagctctt cagccgcttc gtggcctaca gctcagtcat gctgggcctg ctcttcgcgg tgccctttgc cgtcatcctt gtctgttacg tgctcatggc tcggcgactg ctaaagccag cctacgggac ctcgggcggc ctccctaggg ccaagcgcaa gtccgtgcgc accatcgccg tggtgctggc tgtcttcgcc ctctgcttcc tgccattcca cgtcacccgc accctctact actccttccg ctcgctggac ctcagctgcc acaccctcaa cgccatcaac atggcctaca aggttacccg gccgctggcc agtgctaaca gttgccttga ccccgtgctc tacttcctgg ctgggcagag gctcgtacgc tttgcccgag atgccaagcc acccactggc cccagccctg ccaccccggc tcgccgcagg ctgggcctgc gcagatccga cagaactgac atgcagagga taggagatgt gttgggcagc agtgaggact tcaggcggac agagtccacg ccggctggta gcgagaacac taaggacatt cggctgtagg	A	Homo sapiens

				agcagaacac ttcagcctgt gcaggtttat attgggaagc tgtagaggac caggacttgt gcagacgcca cagtctcccc agatatggac catcagtgac tcatgctgga tgaccccatg ctccgtcatt tgacaggggc tcaggatatt cactctgtgg tccagagtca actgttccca taacccctag tcatcgtttg tgtgtataag ttgggggaat taagtttcaa gaaaggcaag agctcaaggt caatgacacc cctggcctga ctcccatgca agtagctggc tgtactgcca aggtacctag gttggagtcc agcctaatca agtcaaatgg agaaacaggc ccagagagga aggtggctta ccaagatcac ataccagagt ctggagctga gctacctggg gtgggggcca agtcacaggt tggccagaaa accctggtaa gtaatgaggg ctgagtttgc acagtggtct ggaatggact gggtgccacg gtggacttag ctctgaggag taccccccagc ccaagagatg aacatctggg gactaatatc atagacccat ctggaggctc ccatgggcta ggagcagtgt gaggctgtaa cttatactaa aggttgtgtt gcctgctaaa aaaaa		
217	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	NP_002555.1	MAADLGPWND TINGTWDGDE LGYRCRFNED FKYVLLPVSY GVVCVLGLCL NAVALYIFLC RLKTWNASTT YMFHLAVSDA LYAASLPLLV YYYARGDHWP FSTVLCKLVR FLFYTNLYCS ILFLTCISVH RCLGVLRPLR SLRWGRARYA RRVAGAVWVL VLACQAPVLY FVTTSARGGR VTCHDTSAPE LFSRFVAYSS VMLGLLFAVP FAVILVCYVL MARRLLKPAY GTSGGLPRAK RKSVRTIAVV LAVFALCFLP FHVTRTLYYS FRSLDLSCHT LNAINMAYKV TRPLASANSC LDPVLYFLAG QRLVRFARDA KPPTGPSPAT PARRRLGLRR SDRTDMQRIG DVLGSSEDFR RTESTPAGSE NTKDIRL	P	Homo sapiens
218	3595	Purinergic Receptor P2Y1	NM_002563	cccccctcccg cggggatcca gttcgcctgc tcccttccgc tcgctggctt ttccgatgct tgctgcgccc ctggccgccg ctgccctctc gccgcctcct acccctcgga gccgccgcct aagtcgagga ggagagaatg accgaggtgc tgtggccggc tgtccccaac gggacggacg ctgccttcct ggccggtccg ggttcgtcct gggggaacag cacggtcgcc tccactgccg ccgtctcctc gtcgttcaaa tgcgccttga ccaagacggg cttccagttt tactacctgc cggctgtcta catcttggta ttcatcatcg gcttcctggg caacagcgtg gccatctgga tgttcgtctt ccacatgaag ccctggagcg gcatctccgt gtacatgttc aatttggctc tggccgactt cttgtacgtg ctgactctgc cagccctgat cttctactac ttcaataaaa cagactggat cttcggggat gccatgtgta aactgcagag gttcatcttt catgtgaacc tctatggcag catcttgttt ctgacatgca tcagtgccca ccggtacagc ggtgtggtgt acccccctcaa gtccctgggc cggctcaaaa agaagaatgc gatctgtatc agcgtgctgg tgtggctcat tgtggtggtg gcgatctccc ccatcctctt ctactcaggt accggggtcc gcaaaaacaa aaccatcacc tgttacgaca ccacctcaga cgagtacctg cgaagttatt tcatctacag catgtgcacg accgtggcca tgttctgtgt ccccttggtg ctgattctgg gctgttacgg attaattgtg agagctttga tttacaaaga tctggacaac tctcctctga ggagaaaatc gatttacctg gtaatcattg tactgactgt ttttgctgtg tcttacatcc ctttccatgt gatgaaaacg atgaacttga gggcccggct tgattttcag accccagcaa tgtgtgcttt caatgacagg gtttatgcca cgtatcaggt gacaagaggt ctagcaagtc tcaacagttg tgtggacccc attctctatt tcttggcggg agatactttc agaaggagac tctcccgagc cacaaggaaa gcttctagaa gaagtgaggc aaatttgcaa tccaagagtg aagacatgac cctcaatatt ttacctgagt tcaagcagaa tggagataca agcctgtgaa ggcacaagaa tctccaaaca cctctctgtt gtaatatggt aggatgctta acagaatcaa gtacttttcc cctctttaac tttctagttt agaaaaaaat caaaccaaga aaatagtgag	A	Homo sapiens

				ttaaaaaaat aatagaagta gaaatgccca catccacact tagcttgttt gggtttgctt tcacagtctc tcttccttct gactagaagt atgtataata aaacaatact acctagttaa acatttactt tctcttttgc ctttaaaatg tgcaggcttt tctgtttaaa gtgtgtgtgc acatgagtac tggggctgtt tttgatatta gtaatttctc taagaaaact agccccctgc aacttgagtt tgtggtttat ctagccttta ttgttttttt aaaatccaca gtaggaataa aaaatctata ttctcagaaa tatctagcat ggtatataac aaaacactaa actcatcagt tcatccggca tcagatcaat ggatctctga gcggggtgtt tttttcagtg tcttataagc atagatgata gttgactgag tttctttagg gcattgaata gacaagtaaa gctaatgaat ttaaaagcct gaaaagtgat tgttttccag ttatttctgg aaaaggtctc attatatatt gggtgctaaa tgtttgatgg ggaaagcctg catatattat cgtactggta aaatgcattc aaaataatta aagtgcatgt attttccttg taaacaccat gagctctctt agacatcttg tgataaagag catttacttg ccccactgct gtgcaatgcc ttaggacttt gtttgtgttc caggacaagt gttcactcac atctgtaaaa acaattttaa gaattgcaaa taaattacag accaaagatt gagtaaagtc aaataactgt tagtaagttg aaggatattg gacaggagga cagtatttca gaaaaggaga ggttgacagt catccacaag gcatagcctc caagtatact ctcaaatgta tgaagcaact ggggtgggca gaagacattt tagaatgagg gcctttagtt taaattaaag tcatggtgga gaagactctt gcttccacca agtgtttgaa aacacaaaat acgatataaa aaaaaaaaaa aaaa		
219	3595	Purinergic Receptor P2Y1	NP_002554.1	MTEVLWPAVP NGTDAAFLAG PGSSWGNSTV ASTAAVSSSF KCALTKTGFQ FYYLPAVYIL VFIIGFLGNS VAIWMFVFHM KPWSGISVYM FNLALADFLY VLTLPALIFY YFNKTDWIFG DAMCKLQRFI FHVNLYGSIL FLTCISAHRY SGVVYPLKSL GRLKKKNAIC ISVLVWLIVV VAISPILFYS GTGVRKNKTI TCYDTTSDEY LRSYFIYSMC TTVAMFCVPL VLILGCYGLI VRALIYKDLD NSPLRRKSIY LVIIVLTVFA VSYIPFHVMK TMNLRARLDF QTPAMCAFND RVYATYQVTR GLASLNSCVD PILYFLAGDT FRRRLSRATR KASRRSEANL QSKSEDMTLN ILPEFKQNGD TSL	P	Homo sapiens
220	3596	Purinergic Receptor P2Y5	NM_005767	ctgatgaaag tgcttccaaa ctgaaaattg gacgtgcctt tacgatggta agcgttaaca gctcccactg cttctataat gactccttta agtacacttt gtatgggtgc atgttcagca tggtgtttgt gcttgggtta gtatccaatt gtgttgccat atacattttc atctgcgtcc tcaaagtccg aaatgaaact acaacttaca tgattaactt ggcaatgtca gacttgcttt ttgtttttac tttacccttc aggatttttt acttcacaac acggaattgg ccatttggag atttactttg taagatttct gtgatgctgt tttataccaa catgtacgga agcattctgt tcttaacctg tattagtgta gatcgatttc tggcaattgt ctacccattt aagtcaaaga ctctaagaac caaaagaaat gcaaagattg tttgcactgg cgtgtggtta actgtgatcg gaggaagtgc acccgccgtt tttgttcagt ctacccactc tcagggtaac aatgcctcag aagcctgctt tgaaaatttt ccagaagcca catggaaaac atatctctca aggattgtaa ttttcatcga aatagtggga ttttttattc ctctaatttt aaatgtaact tgttctagta tggtgctaaa aactttaacc aaaccagtta cattaagtag aagcaaaata aacaaaacta aggttttaaa aatgattttt gtacatttga tcatattctg tttctgtttt gttccttaca atatcaatct tattttatat tctcttgtga gaacacaaac atttgttaat tgctcagtag tggcagcagt aaggacaatg tacccaatca ctctctgtat tgctgtttcc aactgttgtt ttgaccctat agtttactac tttacatcgg acacaattca gaattcaata aaaatgaaaa	A	Homo sapiens

				actggtctgt caggagaagt gacttcagat tctctgaagt tcatggtgca gagaatttta ttcagcataa cctacagacc ttaaaaagta agatatttga caatgaatct gctgcctgaa ataaaaccat taggactcac tgggacagaa ctttcaag		
221	3596	Purinergic Receptor P2Y5	NP_005758.1	MVSVNSSHCF YNDSFKYTLY GCMFSMVFVL GLVSNCVAIY IFICVLKVRN ETTTYMINLA MSDLLFVFTL PFRIFYFTTR NWPFGDLLCK ISVMLFYTNM YGSILFLTCI SVDRFLAIVY PFKSKTLRTK RNAKIVCTGV WLTVIGGSAP AVFVQSTHSQ GNNASEACFE NFPEATWKTY LSRIVIFIEI VGFFIPLILN VTCSSMVLKT LTKPVTLSRS KINKTKVLKM IFVHLIIFCF CFVPYNINLI LYSLVRTQTF VNCSVVAAVR TMYPITLCIA VSNCCFDPIV YYFTSDTIQN SIKMKNWSVR RSDFRFSEVH GAENFIQHNL QTLKSKIFDN ESAA	P	Homo sapiens
222	3597	Purinergic Receptor P2Y6	NM_004154	aaggacagag gaggggccct tcctgtcagc tggctgggag cagaggtggc tttgtctttt cggaagaact ggttctgtgg aatttgtgct tatttcccat caaggatcaa ggacctgctc tggggctacc tcagggcccc acaggatgag gggctggttt tcagatgagt tttctgcttg cctgtcatct ggatagtgtc taaaaatttg caaactgcct tcttgtcagt gtcttgctca ttcttcatga cactcctgat atgtctctca gtttcctcat ctgctgcctc tccagacttc tgccagaaca ttgcacgcga cagtttcagg cacagaactg actggcagca ggggctgctc cacgagtggg aatttgctcc agcacttcac ggactgcaag cgaggcactt gctaactctt ggataacaag acctctgcca gaagaaccat ggctttggaa ggcggagttc aggctgagga gatgggtgcg gtcctcagtg agcccctgcc tccctgaaca taggaaaccc acctgggcag ccatggaatg ggacaatggc acaggccagg ctctgggctt gccacccacc acctgtgtct accgcgagaa cttcaagcaa ctgctgctgc cacctgtgta ttcggcggtg ctggcggctg gcctgccgct gaacatctgt gtcattaccc agatctgcac gtcccgccgg gccctgaccc gcacggccgt gtacacccta aaccttgctc tggctgacct gctatatgcc tgctccctgc ccctgctcat ctacaactat gcccaaggtg atcactggcc ctttggcgac ttcgcctgcc gcctggtccg cttcctcttc tatgccaacc tgcacggcag catcctcttc ctcacctgca tcagcttcca gcgctacctg ggcatctgcc acccgctggc cccctggcac aaacgtgggg gccgccgggc tgcctggcta gtgtgtgtag ccgtgtggct ggccgtgaca acccagtgcc tgcccacagc catcttcgct gccacaggca tccagcgtaa ccgcactgtc tgctatgacc tcagcccgcc tgccctggcc acccactata tgccctatgg catggctctc actgtcatcg gcttcctgct gccctttgct gccctgctgg cctgctactg tctcctggcc tgccgcctgt gccgccagga tggcccggca gagcctgtgg cccaggagcg gcgtggcaag gcggcccgca tggccgtggt ggtggctgct gcctttgcca tcagcttcct gccttttcac atcaccaaga cagcctacct ggcagtgcgc tcgacgccgg gcgtcccctg cactgtattg gaggcctttg cagcggccta caaaggcacg cggccgtttg ccagtgccaa cagcgtgctg gaccccatcc tcttctactt cacccagaag aagttccgcc ggcgaccaca tgagctccta cagaaactca cagccaaatg gcagaggcag ggtcgctgag tcctccaggt cctgggcagc cttcatattt gccattgtgt ccggggcacc aggagcccca ccaaccccaa accatgcgga gaattagagt tcagctcagc tgggcatgga gttaagatcc ctcacaggac ccagaagctc accaaaaact atttcttcag ccccttctct ggcccagacc ctgtgggcat ggagatggac agacctgggc ctggctcttg agaggtccca gtcagccatg gagagctggg gaaaccacat taaggtgctc acaaaaatac agtgtgacgt gtactgtcaa aa	A	Homo sapiens

223	3597	Purinergic Receptor P2Y6	NP_004145.1	MEWDNGTGQA LGLPPTTCVY RENFKQLLLP PVYSAVLAAG LPLNICVITQ ICTSRRALTR TAVYTLNLAL ADLLYACSLP LLIYNYAQGD HWPFGDFACR LVRFLFYANL HGSILFLTCI SFQRYLGICH PLAPWHKRGG RRAAWLVCVA VWLAVTTQCL PTAIFAATGI QRNRTVCYDL SPPALATHYM PYGMALTVIG FLLPFAALLA CYCLLACRLC RQDGPAEPVA QERRGKAARM AVVVAAAFAI SFLPFHITKT AYLAVRSTPG VPCTVLEAFA AAYKGTRPFA SANSVLDPIL FYFTQKKFRR RPHELLQKLT AKWQRQGR	P	Homo sapiens
224	3599	G Protein-Coupled Receptor 23 (GPR23)	NM_005296	cctaccggtc catagtgtca gagtggtgaa cccctgcagc cagcaggcct cctgaaaaaa aagtccatgg gtgacagaag attcattgac ttccaattcc aagattcaaa ttcaagcctc agacccaggt tgggcaatgc tactgccaat aatacttgca ttgttgatga ttccttcaag tataatctca atggtgctgt ctacagtgtt gtattcatct tgggtctgat aaccaacagt gtctctctgt ttgtcttctg tttccgcatg aaaatgagaa gtgagactgc tatttttatc accaatctag ctgtctctga tttgcttttt gtctgtacac taccttttaa aatattttac aacttcaacc gccactggcc ttttggtgac accctctgca agatctctgg aactgcattc cttaccaaca tctatgggag catgctcttt ctcacctgta ttagtgtgga tcgtttcctg gccattgtct atccttttcg atctcgtact attaggacta ggaggaattc tgccattgtg tgtgctggtg tctggatcct agtcctcagt ggcggtattt cagcctcttt gttttccacc actaatgtca acaatgcaac caccacctgc tttgaaggct tctccaaacg tgtctggaag acttatttat ccaagatcac aatatttatt gaagttgttg ggtttatcat tcctctaata ttgaatgtct cttgctcttc tgtggtgctg agaactcttc gcaagcctgc tactctgtct caaattggga ccaataagaa aaaagtactg aaaatgatca cagtacatat ggcagtcttt gtggtatgct ttgtacccta caactctgtc ctcttcttgt atgccctggt gcgctcccaa gctattacta attgcttttt ggaaagattt gcaaagatca tgtacccaat caccttgtgc cttgcaactc tgaactgttg ttttgaccct ttcatctatt acttcaccct tgaatccttt cagaagtcct tctacatcaa tgcccacatc agaatggagt ccctgtttaa gactgaaaca cctttgacca caaagccttc ccttccagct attcaagagg aagtgagtga tcaaacaaca aataatggtg gtgaattaat gctagaatcc acctttagg tatgagaaat gtgttcaggt ccagatatgg tttctcctat aatttttcct atgctataaa ctaaagattt gaagctaatg atactgagaa taatgcacca aatccagtca gatacatttg tttgaaggta tactgtagag tttttattgc tgttttgttc agtaattata ggtcaaatct aattacaaca accaagatgg attgccaaac tcttctgctt ggttggaatt tcattgtatc gcattatcca ggtggctagt ggcatttgat aatatagaga tgactttgaa actttcaaaa aggtatttct attccaatga tatttggtaa ttaggttggg cctataaata tagaacaaat tcagggattt ttaaaaaatt gtgttactac tgatatatgc tagttttatt ttattttttt ggactgtcat tgagtttatt ttagcacaag aatattttta gcctaacatt attaataaga aatgtgtcaa atttttaaca ttggtaaaat atgttatgtg cattttgaaa acagaaaaca aattgcgttg gcatgtacgt gggtgggaag aaaaagaaaa ttaacaggat ttacacaatt ataatcacca gcagtgtgag tttaaaaaac ttcgttgttt ttacaccaaa ttaaaatttt catgtcaaac ttcaaagcca gaaagctgct aaatacgtgt ctggcaggta aaagctggaa aattacttaa aacaggaaag tgtcaataaa aaaacttgag caacaccaac atattttttc ttaaaatgtc acgttatctt cattttggga aactaggttc tataaaatat ttatcctccc tgttatactt tggagcacag cacagccaga aaggggctgc atttgtgccc aggtcaggag caaattgaaa aaaaaaataa	A	Homo sapiens

				agtaatacta aaaaatcaaa ctataaaccc aaaacattta ttaaaacctg aattaatcct ttttggaggg aggagtagag atatataacc tgaaaatact tattctttct tatcgaattt tggagcctaa tatagccagg agctgctgaa tttgtgcccc tggattggaa ccaaataaaa aaaaaaaaaa aaaattcct		
225	3599	G Protein-Coupled Receptor 23 (GPR23)	NP_005287.1	MGDRRFIDFQ FQDSNSSLRP RLGNATANNT CIVDDSFKYN LNGAVYSVVF ILGLITNSVS LFVFCFRMKM RSETAIFITN LAVSDLLFVC TLPFKIFYNF NRHWPFGDTL CKISGTAFLT NIYGSMLFLT CISVDRFLAI VYPFRSRTIR TRRNSAIVCA GVWILVLSGG ISASLFSTTN VNNATTTCFE GFSKRVWKTY LSKITIFIEV VGFIIPLILN VSCSSVVLRT LRKPATLSQI GTNKKKVLKM ITVHMAVFVV CFVPYNSVLF LYALVRSQAI TNCFLERFAK IMYPITLCLA TLNCCFDPFI YYFTLESFQK SFYINAHIRM ESLFKTETPL TTKPSLPAIQ EEVSDQTTNN GGELMLESTF	P	Homo sapiens
226	3638	Parathyroid Hormone Receptor 2 (PTHR2)	NM_005048	ggccggtggc ccgggcccga ccaccccagc tgcgcgtcgt tactggccac aagtttgctc tgggccagcc aagttggcaa cttggaagct tctcccgggc tctggaggag ggtccctgct tcttcctaca gccgttccgg gcatggccgg gctgggggcg tcgctccacg tctggggttg gctaatgctc ggcagctgcc tcctggccag agcccagctg gattctgatg gcaccattac tatagaggag cagattgtcc ttgtgctgaa agcgaaagta caatgtgaac tcaacatcac agctcaactc caggagggag aaggtaattg tttccctgaa tgggatggac tcatttgttg gcccagagga acagtgggga aaatatcggc tgttccatgc cctccttata tttatgactt caaccataaa ggagttgctt tccgacactg taaccccaat ggaacatggg attttatgca cagcttaaat aaaacatggg ccaattattc agactgcctt cgctttctgc agccagatat cagcatagga aagcaagaat tctttgaacg cctctatgta atgtataccg ttggctactc catctctttt ggttccttgg ctgtggctat tctcatcatt ggttacttca gacgattgca ttgcactagg aactatatcc acatgcactt atttgtgtct ttcatgctga gagctacaag catctttgtc aaagacagag tagtccatgc tcacatagga gtaaaggagc tggagtccct aataatgcag gatgacccac aaaattccat tgaggcaact tctgtggaca aatcacaata tatcgggtgc aagattgctg ttgtgatgtt tatttacttc ctggctacaa attattattg gatcctggtg gaaggtctct acctgcataa tctcatcttt gtggctttct tttcggacac caaatacctg tggggcttca tcttgatagg ctggggtttt ccagcagcat ttgttgcagc atgggctgtg gcacgagcaa ctctggctga tgcgaggtgc tgggaactta gtgctggaga catcaagtgg atttatcaag caccgatctt agcagctatt gggctgaatt ttattctgtt tctgaatacg gttagagttc tagctaccaa aatctgggag accaatgcag ttgggcatga cacaaggaag caatacagga aactggccaa atcgacactg gtcctggtcc tagtctttgg agtgcattac atcgtgttcg tatgcctgcc tcactccttc actgggctcg ggtgggagat ccgcatgcac tgtgagctct tcttcaactc ctttcagggt ttctttgtgt ctatcatcta ctgctactgc aatggagagg ttcaggcaga ggtgaagaag atgtggagtc ggtggaatct ctccgtggac tggaaaagga caccgccatg tggcagccgc agatgcggct cagtgctcac caccgtgacg cacagcacca gcagccagtc acaggtggcg gccagcacac gcatggtgct tatctctggc aaagctgcca agatcgccag cagacagcct gacagccaca tcactttacc tggctatgtc tggagtaact cagagcagga ctgcctgcca cactctttcc acgaggagac caaggaagat agtgggaggc agggagatga tattctaatg gagaagcctt ccaggcctat ggaatctaac ccagacactg aaggatgcca aggagaaact gaggatgttc tctgaatgga	A	Homo sapiens

				catttgtggc tgactttcat gggctggtcc aatggctggt tgtgtgagag ggcttggctg atactcctat gcttgagttc aaaggctgaa aattcagtta aggtgttact taataatagt ttttaggctc catgaattgg ctcctgtaaa tactaacgac atgaaaatgc aagtgtcaat ggagtagttt attaccttct attggcatca agttttcctc taaattaatg tatggtattt gctctgtgat tgttcatttt tttctgctac ttttgggtag aaaaaagatt caattgcttg gctgtagctt tctctcatat atatcaccct aaatataatg aagatctttt agtgtgtatc atttttcctt tagaaactag tattctctta tttcttactt taatgtactt ctatcactgc atttattttg cctgtgcata ggagcaatta ggatctaaaa aaatatatgg gaagataaaa gatctaagaa caagtacttg ctggaaaatt agttggctgg acattgataa aataatgcat ttataacaat tacatgtgtt tttgggaaca aggaaaattt ctcaaaaaag aatatttcac acatcccttc ttttgaatgg cctctttgtg accagccaga cctcaggtct tcactctttc ttctttgtaa accatgtcat gtggaaagat ttcctcagtt agtgagcttg tgtctgcaaa ttgattttgt ttgtaatgta ttttgatagc aaatcatgct gcatctatat ctttttcttg tttgagctgt tactacattg tacatggcat gtgggatcaa ttaaaaattt gttttaaaaa t		
227	3638	Parathyroid Hormone Receptor 2 (PTHR2)	NP_005039.1	MAGLGASLHV WGWLMLGSCL LARAQLDSDG TITIEEQIVL VLKAKVQCEL NITAQLQEGE GNCFPEWDGL ICWPRGTVGK ISAVPCPPYI YDFNHKGVAF RHCNPNGTWD FMHSLNKTWA NYSDCLRFLQ PDISIGKQEF FERLYVMYTV GYSISFGSLA VAILIIGYFR RLHCTRNYIH MHLFVSFMLR ATSIFVKDRV VHAHIGVKEL ESLIMQDDPQ NSIEATSVDK SQYIGCKIAV VMFIYFLATN YYWILVEGLY LHNLIFVAFF SDTKYLWGFI LIGWGFPAAF VAAWAVARAT LADARCWELS AGDIKWIYQA PILAAIGLNF ILFLNTVRVL ATKIWETNAV GHDTRKQYRK LAKSTLVLVL VFGVHYIVFV CLPHSFTGLG WEIRMHCELF FNSFQGFFVS IIYCYCNGEV QAEVKKMWSR WNLSVDWKRT PPCGSRRCGS VLTTVTHSTS SQSQVAASTR MVLISGKAAK IASRQPDSHI TLPGYVWSNS EQDCLPHSFH EETKEDSGRQ GDDILMEKPS RPMESNPDTE GCQGETEDVL	P	Homo sapiens
228	3640	Parathyroid Hormone Receptor 1 (PTHR1)	NM_000316	cggagggacg cggccctagg cggtggcgat ggggaccgcc cggatcgcac ccggcctggc gctcctgctc tgctgccccg tgctcagctc cgcgtacgcg ctggtggatg cagatgacgt catgactaaa gaggaacaga tcttcctgct gcaccgtgct caggcccagt gcgaaaaacg gctcaaggag gtcctgcaga ggccagccag cataatggaa tcagacaagg gatggacatc tgcgtccaca tcagggaagc ccaggaaaga taaggcatct gggaagctct accctgagtc tgaggaggac aaggaggcac ccactggcag caggtaccga gggcgcccct gtctgccgga atgggaccac atcctgtgct ggccgctggg ggcaccaggt gaggtggtgg ctgtgccctg tccggactac atttatgact tcaatcacaa aggccatgcc taccgacgct gtgaccgcaa tggcagctgg gagctggtgc ctgggcacaa caggacgtgg gccaactaca gcgagtgtgt caaatttctc accaatgaga ctcgtgaacg ggaggtgttt gaccgcctgg gcatgattta caccgtgggc tactccgtgt ccctggcgtc cctcaccgta gctgtgctca tcctggccta ctttaggcgg ctgcactgca cgcgcaacta catccacatg cacctgttcc tgtccttcat gctgcgcgcc gtgagcatct tcgtcaagga cgctgtgctc tactctggcg ccacgcttga tgaggctgag cgcctcaccg aggaggagct gcgcgccatc gcccaggcgc ccccgccgcc tgccaccgcc gctgccggct acgcgggctg cagggtggct gtgaccttct tcctttactt cctggccacc aactactact ggattctggt ggaggggctg tacctgcaca gcctcatctt	A	Homo sapiens

				catggccttc ttctcagaga agaagtacct gtggggcttc acagtcttcg gctggggtct gcccgctgtc ttcgtggctg tgtgggtcag tgtcagagct accctggcca acaccgggtg ctgggacttg agctccggga acaaaaagtg gatcatccag gtgcccatcc tggcctccat tgtgctcaac ttcatcctct tcatcaatat cgtccgggtg ctcgccacca agctgcggga gaccaacgcc ggccggtgtg acacacggca gcagtaccgg aagctgctca aatccacgct ggtgctcatg cccctctttg gcgtccacta cattgtcttc atggccacac catacaccga ggtctcaggg acgctctggc aagtccagat gcactatgag atgctcttca actccttcca gggatttttt gtcgcaatca tatactgttt ctgcaatggc gaggtacaag ctgagatcaa gaaatcttgg agccgctgga cactggcact ggacttcaag cgaaaggcac gcagcgggag cagcagctat agctacggcc ccatggtgtc ccacacaagt gtgaccaatg tcggcccccg tgtgggactc ggcctgcccc tcagcccccg cctactgccc actgccacca ccaacggcca ccctcagctg cctggccatg ccaagccagg gaccccagcc ctggagaccc tcgagaccac accacctgcc atggctgctc ccaaggacga tgggttcctc aacggctcct gctcaggcct ggacgaggag gcctctgggc ctgagcggcc acctgccctg ctacaggaag agtgggagac agtcatgtga ccaggcgctg gggctggac ctgctgacat agtggatgga cagatggacc aaaagatggg tggttgaatg atttccact cagggcctgg ggccaagagg aaaaacaggg aaaaaaagaa aaaaaaaga aaaaggaa		
229	3640	Parathyroid Hormone Receptor 1 (PTHR1)	NP_000307.1	MGTARIAPGL ALLLCCPVLS SAYALVDADD VMTKEEQIFL LHRAQAQCEK RLKEVLQRPA SIMESDKGWT SASTSGKPRK DKASGKLYPE SEEDKEAPTG SRYRGRPCLP EWDHILCWPL GAPGEVVAVP CPDYIYDFNH KGHAYRRCDR NGSWELVPGH NRTWANYSEC VKFLTNETRE REVFDRLGMI YTVGYSVSLA SLTVAVLILA YFRRLHCTRN YIHMHLFLSF MLRAVSIFVK DAVLYSGATL DEAERLTEEE LRAIAQAPPP PATAAAGYAG CRVAVTFFLY FLATNYYWIL VEGLYLHSLI FMAFFSEKKY LWGFTVFGWG LPAVFVAVWV SVRATLANTG CWDLSSGNKK WIIQVPILAS IVLNFILFIN IVRVLATKLR ETNAGRCDTR QQYRKLLKST LVLMPLFGVH YIVFMATPYT EVSGTLWQVQ MHYEMLFNSF QGFFVAIIYC FCNGEVQAEI KKSWSRWTLA LDFKRKARSG SSSYSYGPMV SHTSVTNVGP RVGLGLPLSP RLLPTATTNG HPQLPGHAKP GTPALETLET TPPAMAAPKD DGFLNGSCSG LDEEASGPER PPALLQEEWE TVM	P	Homo sapiens
230	3732	PACAP Receptor Type 1	NM_001118	agcccagaga cacattgggg ctgacctgcc gctgctgtca gtgggaggcc agtggtgctg gccaagaagt gtcatggctg gtgtcgtgca cgtttccctg gctgctcact gcggggcctg tccgtggggc cggggcagac tccgcaaagg acgcgcagcc tgcaagtccg cggcccagag acacattggg gctgacctgc cgctgctgtc agtgggaggc cagtggtgct ggccaagaag tgtcatggct ggtgtcgtgc acgtttccct ggctgctctc ctcctgctgc ctatggcccc tgccatgcat tctgactgca tcttcaagaa ggagcaagcc atgtgcctgg agaagatcca gagggccaat gagctgatgg gcttcaatga ttcctctcca ggctgtcctg ggatgtggga caacatcacg tgttggaagc ccgcccatgt gggtgagatg gtcctggtca gctgccctga gctcttccga atcttcaacc cagaccaagt ctgggagacc gaaaccattg gagagtctga ttttggtgac agtaactcct tagatctctc agacatggga gtggtgagcc ggaactgcac ggaggatggc tggtcggaac ccttccctca ttactttgat gcctgtgggt ttgatgaata tgaatctgag actggggacc aggattatta ctacctgtca gtgaaggccc tctacacggt tggctacagc acatccctcg tcaccctcac cactgccatg gtcatccttt gtcgcttccg gaagctgcac tgcacacgca acttcatcca catgaacctg tttgtgtcgt tcatgctgag	A	Homo sapiens

				ggcgatctcc gtcttcatca aagactggat tctgtatgcg gagcaggaca gcaaccactg cttcatctcc actgtggaat gtaaggccgt catggttttc ttccactact gtgttgtgtc caactacttc tggctgttca tcgagggcct gtacctcttc actctgctgg tggagacctt cttccctgaa aggagatact tctactggta caccatcatt ggctgggga ccccaactgt gtgtgtgaca gtgtgggcta cgctgagact ctactttgat gacacaggct gctgggatat gaatgacagc acagctctgt ggtgggtgat caaaggccct gtggttggct ctatcatggt taactttgtg ctttttattg gcattatcgt catccttgtg cagaaacttc agtctccaga catgggaggc aatgagtcca gcatctactt gcgactggcc cggtccaccc tgctgctcat cccactattc ggaatccact acacagtatt tgccttctcc ccagagaatg tcagcaaaag ggaaagactc gtgtttgagc tggggctggg ctccttccag ggctttgtgg tggctgttct ctactgtttt ctgaatggtg aggtacaagc ggagatcaag cgaaaatggc gaagctggaa ggtgaaccgt tacttcgctg tggacttcaa gcaccgacac ccgtctctgg ccagcagtgg ggtgaatggg ggcacccagc tctccatcct gagcaagagc agctcccaaa tccgcatgtc tggcctccct gctgacaatc tggccacctg agccatgctc ccct		
231	3732	PACAP Receptor Type 1	NP_001109.1	MAGVVHVSLA AHCGACPWGR GRLRKGRAAC KSAAQRHIGA DLPLLSVGGQ WCWPRSVMAG VVHVSLAALL LLPMAPAMHS DCIFKKEQAM CLEKIQRANE LMGFNDSSPG CPGMWDNITC WKPAHVGEMV LVSCPELFRI FNPDQVWETE TIGESDFGDS NSLDLSDMGV VSRNCTEDGW SEPFPHYFDA CGFDEYESET GDQDYYYLSV KALYTVGYST SLVTLTTAMV ILCRFRKLHC TRNFIHMNLF VSFMLRAISV FIKDWILYAE QDSNHCFIST VECKAVMVFF HYCVVSNYFW LFIEGLYLFT LLVETFFPER RYFYWYTIIG WGTPTVCVTV WATLRLYFDD TGCWDMNDST ALWWVIKGPV VGSIMVNFVL FIGIIVILVQ KLQSPDMGGN ESSIYLRLAR STLLLIPLFG IHYTVFAFSP ENVSKRERLV FELGLGSFQG FVVAVLYCFL NGEVQAEIKR KWRSWKVNRY FAVDFKHRHP SLASSGVNGG TQLSILSKSS SQIRMSGLPA DNLAT	P	Homo sapiens
232	3844	Apelin Receptor	NM_005161	atggaggaag gtggtgattt tgacaactac tatggggcag acaaccagtc tgagtgtgag tacacagact ggaaatcctc gggggccctc atccctgcca tctacatgtt ggtcttcctc ctgggcacca cgggaaacgg tctggtgctc tggaccgtgt ttcggagcag ccgggagaag aggcgctcag ctgatatctt cattgctagc ctggcggtgg ctgacctgac cttcgtggtg acgctgcccc tgtgggctac ctacacgtac cgggactatg actggccctt tgggaccttc ttctgcaagc tcagcagcta cctcatcttc gtcaacatgt acgccagcgt cttctgcctc accggcctca gcttcgaccg ctacctggcc atcgtgaggc cagtggccaa tgctcggctg aggctgcggg tcagcggggc cgtggccacg gcagttcttt gggtgctggc cgccctcctg gccatgcctg tcatggtgtt acgcaccacc ggggacttgg agaacaccac taaggtgcag tgctacatgg actactccat ggtggccact gtgagctcag agtgggcctg ggaggtgggc cttggggtct cgtccaccac cgtgggcttt gtggtgccct tcaccatcat gctgacctgt tacttcttca tcgcccaaac catcgctggc cacttccgca aggaacgcat cgagggcctg cggaagcggc gccggctgct cagcatcatc gtggtgctgg tggtgacctt tgccctgtgc tggatgccct accacctggt gaagacgctg tacatgctgg gcagcctgct gcactggccc tgtgactttg acctcttcct catgaacatc ttcccctact gcacctgcat cagctacgtc aacagctgcc tcaacccctt cctctatgcc tttttcgacc cccgcttccg ccaggcctgc acctccatgc tctgctgtgg ccagagcagg tgcgcaggca cctcccacag cagcagtggg gagaagtcag ccagctactc ttcggggcac agccaggggc ccggccccaa catgggcaag	A	Homo sapiens

				ggtggagaac agatgcacga gaaatccatc ccctacagcc aggagaccct tgtggttgac tag		
233	3844	Apelin Receptor	NP_005152.1	MEEGGDFDNY YGADNQSECE YTDWKSSGAL IPAIYMLVFL LGTTGNGLVL WTVFRSSREK RRSADIFIAS LAVADLTFVV TLPLWATYTY RDYDWPFGTF FCKLSSYLIF VNMYASVFCL TGLSFDRYLA IVRPVANARL RLRVSGAVAT AVLWVLAALL AMPVMVLRTT GDLENTTKVQ CYMDYSMVAT VSSEWAWEVG LGVSSTTVGF VVPFTIMLTC YFFIAQTIAG HFRKERIEGL RKRRRLLSII VVLVVTFALC WMPYHLVKTL YMLGSLLHWP CDFDLFLMNI FPYCTCISYV NSCLNPFLYA FFDPRFRQAC TSMLCCGQSR CAGTSHSSSG EKSASYSSGH SQGPGPNMGK GGEQMHEKSI PYSQETLVVD	P	Homo sapiens
234	3845	Chemokine-Like Receptor 1 (CMKLR1)	NM_004072	gaattcggca cgagtcaggg aagcagcccc ggcggccagc agggagctca ggacagagca ggctccctgg gaagcctccg ggtgataggg gtgttccagc tgcggcgctc tggggggttca gaggggggatc ttgaatgaac aaatgaatga actgctttct gggcaaacag ccacagccag aggagcctgt gattggcaga aagaagccag ggtgtgcaag tctccccaac agcctcgagt ggcctgcagt cacagggaac cctcaggaag accttccggg cagagaccag agggaagccc atctctccag cagaactgct tggatttttc taccaggagg ctcagggctc tgcaacaatg atagcagaag ctgatggcat ctagagatct aggctgggac tagcacagca tcacttctac cactttctgt tggtcacagc aactcaccat gccagtgcag attcaagggg aggagaaata gagtccactt cttgatggga ggcgtgacat agaatggagg atgaagatta caacacttcc atcagttacg gtgatgaata ccctgattat ttagactcca ttgtggtttt ggaggactta tccccccttgg aagccagggt gaccaggatc ttcctggtgg tggtctacag catcgtctgc ttcctcggga ttctgggcaa tggtctggtg atcatcattg ccaccttcaa gatgaagaag acagtgaaca tggtctggtt cctcaacctg gcagtggcag atttcctgtt caacgtcttc ctcccaatcc atatcaccta tgccgccatg gactaccact gggttttcgg gacagccatg tgcaagatca gcaacttcct tctcatccac aacatgttca ccagcgtctt cctgctgacc atcatcagct ctgaccgctg catctctgtg ctcctccctg tctggtccca gaaccaccgc agcgttcgcc tggcttacat ggcctgcatg gtcatctggg tcctggcttt cttcttgagt tccccatctc tcgtcttccg ggacacagcc aacctgcatg ggaaaatatc ctgcttcaac aacttcagcc tgtccacacc tgggtcttcc tcgtggccca ctcactccca aatggaccct gtggggtata gccggcacat ggtggtgact gtcacccgct tcctctgtgg cttcctggtc ccagtcctca tcatcacagc ttgctacctc accatcgtgt gcaaactgca gcgcaaccgc ctggccaaga ccaagaagcc cttcaagatt attgtgacca tcatcattac cttcttcctc tgctggtgcc cctaccacac actcaacctc ctagagctcc accacactgc catgcctggc tctgtcttca gcctgggttt gcccctggcc actgcccttg ccattgccaa cagctgcatg aaccccattc tgtatgtttt catgggtcag gacttcaaga agttcaaggt ggccctcttc tctcgcctgg tcaatgctct aagtgaagat acaggccact cttcctaccc cagccataga agctttacca agatgtcatc aatgaatgag aggacttcta tgaatgagag ggagaccggc atgctttgat cctcactgtg gaacccctca atggactctc tcaacccagg gacacccaag gatatgtctt ctgaagatca aggcaagaac ctctttagca tccaccaatt ttcactgcat tttgcatggg atgaacagtg ttttatgctg ggaatctagg gcctggaacc cctttcttct agtggacaga acatgctgtg ttccatacag ccttggacta gcaatttatg cttcttggga ggccagcctt gactgactca aagcaaaaaa ggaagaattc	A	Homo sapiens

235	3845	Chemokine-Like Receptor 1 (CMKLR1)	NP_004063.1	MEDEDYNTSI SYGDEYPDYL DSIVVLEDLS PLEARVTRIF LVVVYSIVCF LGILGNGLVI IIATFKMKKT VNMVWFLNLA VADFLFNVFL PIHITYAAMD YHWVFGTAMC KISNFLLIHN MFTSVFLLTI ISSDRCISVL LPVWSQNHRS VRLAYMACMV IWVLAFFLSS PSLVFRDTAN LHGKISCFNN FSLSTPGSSS WPTHSQMDPV GYSRHMVVTV TRFLCGFLVP VLIITACYLT IVCKLQRNRL AKTKKPFKII VTIIITFFLC WCPYHTLNLL ELHHTAMPGS VFSLGLPLAT ALAIANSCMN PILYVFMGQD FKKFKVALFS RLVNALSEDT GHSSYPSHRS FTKMSSMNER TSMNERETGM L	P	Homo sapiens
236	3846	Sphingolipid Receptor Edg1	NM_001400	gtcgggggca gcagcaagat gcgaagcgag ccgtacagat cccgggctct ccgaacgcaa cttcgccctg cttgagcgag gctgcggttt ccgaggccct ctccagccaa ggaaaagcta cacaaaaagc ctggatcact catcgaacca cccctgaagc cagtgaaggc tctctcgcct cgccctctag cgttcgtctg gagtagcgcc accccggctt cctggggaca cagggttggc accatggggc ccaccagcgt cccgctggtc aaggcccacc gcagctcggt ctctgactac gtcaactatg atatcatcgt ccggcattac aactacacgg gaaagctgaa tatcagcgcg gacaaggaga acagcattaa actgacctcg gtggtgttca ttctcatctg ctgctttatc atcctggaga acatctttgt cttgctgacc atttggaaaa ccaagaaatt ccaccgaccc atgtactatt ttattggcaa tctggccctc tcagacctgt tggcaggagt agcctacaca gctaacctgc tcttgtctgg ggccaccacc tacaagctca ctcccgccca gtggtttctg cgggaaggga gtatgtttgt ggccctgtca gcctccgtgt tcagtctcct cgccatcgcc attgagcgct atatcacaat gctgaaaatg aaactccaca acgggagcaa taacttccgc ctcttcctgc taatcagcgc ctgctgggtc atctccctca tcctgggtgg cctgcctatc atgggctgga actgcatcag tgcgctgtcc agctgctcca ccgtgctgcc gctctaccac aagcactata tcctcttctg caccacggtc ttcactctgc ttctgctctc catcgtcatt ctgtactgca gaatctactc cttggtcagg actcggagcc gccgcctgac gttccgcaag aacatttcca aggccagccg cagctctgag aagtcgctgg cgctgctcaa gaccgtaatt atcgtcctga gcgtcttcat cgcctgctgg gcaccgctct tcatcctgct cctgctggat gtgggctgca aggtgaagac ctgtgacatc ctcttcagag cggagtactt cctggtgtta gctgtgctca actccggcac caaccccatc atttacactc tgaccaacaa ggagatgcgt cgggccttca tccggatcat gtcctgctgc aagtgcccga gcggagactc tgctggcaaa ttcaagcgac ccatcatcgc cggcatggaa ttcagccgca gcaaatcgga caattcctcc cacccccaga aagacgaagg ggacaaccca gagaccatta tgtcttctgg aaacgtcaac tcttcttcct agaactggaa gctgtccacc caccggaagc gctctttact tggtcgctgg ccaccccagt gtttggaaaa aaatctctgg gcttcgactg ctgccaggga ggagctgctg caagccagag ggaggaaggg ggagaatacg aacagcctgg tggtgtcggg tgttggtggg tagagttagt tcctgtgaac aatgcactgg gaagggtgga gatcaggtcc cggcctggaa tatatattct accccccctgg agctttgatt ttgcactgag ccaaaggtct agcattgtca agctcctaaa gggttcattt ggcccctcct caaagactaa tgtccccatg tgaaagcgtc tctttgtctg gagctttgag gagatgtttt ccttcacttt agtttcaaac ccaagtgagt gtgtgcactt ctgcttcttt agggatgccc tgtacatccc acaccccacc ctcccttccc ttcatacccc tcctcaacgt tcttttactt tatactttaa ctacctgaga gttatcagag ctggggttgt ggaatgatcg atcatctata gcaaataggc tatgttgagt acgtaggctg tgggaagatg aagatggttt ggaggtgtaa aacaatgtcc ttcgctgagg ccaaagtttc	A	Homo sapiens

				catgtaagcg ggatccgttt tttggaattt ggttgaagtc actttgattt ctttaaaaaa catcttttca atgaaatgtg ttaccatttc atatccattg aagccgaaat ctgcataagg aagcccactt tatctaaatg atattagcca ggatccttgg tgtcctagga gaaacagaca agcaaaacaa agtgaaaacc gaatggatta acttttgcaa accaagggag atttcttagc aaatgagtct aacaaatatg acatccgtct ttcccacttt tgttgatgtt tatttcagaa tcttgtgtga ttcatttcaa gcaacaacat gttgtatttt gttgtgttaa aagtactttt cttgattttt gaatgtattt gtttcaggaa gaagtcattt tatggatttt tctaacccgt gttaactttt ctagaatcca ccctcttgtg cccttaagca ttactttaac tggtagggaa cgccagaact tttaagtcca gctattcatt agatagtaat tgaagatatg tataaatatt acaaagaata aaaatatatt actgtctctt tagtatggtt ttcagtgcaa ttaaaccgag agatgtcttg ttttttttaaa aagaatagta tttaataggt ttctgacttt tgtggatcat tttgcacata gctttatcaa cttttaaaca ttaataaact gatttttttta aag		
237	3846	Sphingolipid Receptor Edg1	NP_001391.2	MGPTSVPLVK AHRSSVSDYV NYDIIVRHYN YTGKLNISAD KENSIKLTSV VFILICCFII LENIFVLLTI WKTKKFHRPM YYFIGNLALS DLLAGVAYTA NLLLSGATTY KLTPAQWFLR EGSMFVALSA SVFSLLAIAI ERYITMLKMK LHNGSNNFRL FLLISACWVI SLILGGLPIM GWNCISALSS CSTVLPLYHK HYILFCTTVF TLLLLSIVIL YCRIYSLVRT RSRRLTFRKN ISKASRSSEK SLALLKTVII VLSVFIACWA PLFILLLLDV GCKVKTCDIL FRAEYFLVLA VLNSGTNPII YTLTNKEMRR AFIRIMSCCK CPSGDSAGKF KRPIIAGMEF SRSKSDNSSH PQKDEGDNPE TIMSSGNVNS SS	P	Homo sapiens
238	3847	Sphingolipid Receptor Edg3	NM_005226	atggcaactg ccctcccgcc gcgtctccag ccggtgcggg ggaacgagac cctgcgggag cattaccagt acgtggggaa gttggcgggc aggctgaagg aggcctccga gggcagcacg ctcaccaccg tgctcttctt ggtcatctgc agcttcatcg tcttggagaa cctgatggtt ttgattgcca tctggaaaaa caataaattt cacaaccgca tgtacttttt cattggcaac ctggctctct gcgacctgct ggccggcatc gcttacaagg tcaacattct gatgtctggc aagaagacgt tcagcctgtc tcccacggtc tggttcctca gggagggcag tatgttcgtg gcccttgggg cgtccacctg cagcttactg gccatcgcca tcgagcggca cttgacaatg atcaaaatga ggccttacga cgccaacaag aggcaccgcg tcttcctcct gatcgggatg tgctggctca ttgccttcac gctgggcgcc ctgcccattc tgggctggaa ctgcctgcac aatctccctg actgctctac catcctgccc ctctactcca agaagtacat tgccttctgc atcagcatct tcacggccat cctggtgacc atcgtgatcc tctacgcacg catctacttc ctggtgaagt ccagcagccg taaggtggcc aaccacaaca actcggagcg gtccatggca ctgctgcgga ccgtggtgat tgtggtgagc gtgttcatcg cctgctggtc cccactcttc atcctcttcc tcattgatgt ggcctgcagg gtgcaggcgt gccccatcct cttcaaggct cagtggttca tcgtgttggc tgtgctcaac tccgccatga acccggtcat ctacacgctg gccagcaagg agatgcggcg ggccttcttc cgtctggtct gcaactgcct ggtcagggga cggggggccc gcgcctcacc catccagcct gcgctcgacc caagcagaag taaatcaagc agcagcaaca atagcagcca ctctccgaag gtcaaggaag acctgcccca cacagacccc tcatcctgca tcatggacaa gaacgcagca cttcagaatg ggatcttctg caactga	A	Homo sapiens
239	3847	Sphingolipid Receptor Edg3	NP_005217.1	MATALPPRLQ PVRGNETLRE HYQYVGKLAG RLKEASEGST LTTVLFLVIC SFIVLENLMV LIAIWKNNKF HNRMYFFIGN LALCDLLAGI AYKVNILMSG KKTFSLSPTV WFLREGSMFV ALGASTCSLL AIAIERHLTM IKMRPYDANK RHRVFLLIGM CWLIAFTLGA LPILGWNCLH	P	Homo sapiens

				NLPDCSTILP LYSKKYIAFC ISIFTAILVT IVILYARIYF LVKSSSRKVA NHNNSERSMA LLRTVVIVVS VFIACWSPLF ILFLIDVACR VQACPILFKA QWFIVLAVLN SAMNPVIYTL ASKEMRRAFF RLVCNCLVRG RGARASPIQP ALDPSRSKSS SSNNSSHSPK VKEDLPHTDP SSCIMDKNAA LQNGIFCN		
240	3848	C-C Chemokine Receptor 9	NM_006641	gcccctcatc ccaggcagag agcaacccag ctctttcccc agacactgag agctggtggt gcctgctgtc ccagggagag ttgcatcgcc ctccacaagc cctattccta acatggctga tgactatggc tctgaatcca catcttccat ggaagactac gttaacttca acttcactga cttctactgt gagaaaaaca atgtcaggca gtttgcgagc catttcctcc acccttgta ctggctcgtg ttcatcgtgg gtgccttggg caacagtctt gttatccttg tctactggta ctgcacaaga gtgaagacca tgaccgacat gttccttttg aatttggcaa ttgctgacct cctctttctt gtcactcttc ccttctgggc cattgctgct gctgaccagt ggaagttcca gaccttcatg tgcaaggtgg tcaacagcat gtacaagatg aacttctaca gctgtgtgtt gctgatcatg tgcatcagcg tggacaggta cattgccatt gcccaggcca tgagagcaca tacttggagg gagaaaaggc ttttgtacag caaaatggtt tgctttacca tctgggtatt ggcagctgct ctctgcatcc cagaaatctt atacagccaa atcaaggagg aatccggcat tgctatctgc accatggttt accctagcga tgagagcacc aaactgaagt cagctgtctt gaccctgaag gtcattctgg ggttcttcct tcccttcgtg gtcatggctt gctgctatac catcatcatt cacaccctga tacaagccaa gaagtcttcc aagcacaaag ccctaaaagt gaccatcact gtcctgaccg tctttgtctt gtctcagttt ccctacaact gcattttgtt ggtgcagacc attgacgcct atgccatgtt catctccaac tgtgccgttt ccaccaacat tgacatctgc ttccaggtca cccagaccat cgccttcttc cacagttgcc tgaaccctgt tctctatgtt tttgtgggtg agagattccg ccgggatctc gtgaaaaccc tgaagaactt gggttgcatc agccaggccc agtgggtttc atttacaagg agagagggaa gcttgaagct gtcgtctatg ttgctggaga caacctcagg agcactctcc ctctgagggg tcttctctga ggtgcatggt tcttttggaa gaaatgagaa atacagaaac agtttcccca ctgatgggac cagagagagt gaaagagaaa agaaaactca gaaagggatg aatctgaact atatgattac ttgtagtcag aatttgccaa agcaaatatt tcaaaatcaa ctgactagtg caggaggctg ttgattggct cttgactgtg atgcccgcaa ttctcaaagg aggactaagg accggcactg tggagcaccc tggctttgcc actcgccgga gcatcaatgc cgctgcctct ggaggagccc ttggattttc tccatgcact gtgaacttct gtggcttcag ttctcatgct gcctcttcca aaaggggaca cagaagcact ggctgctgct acagaccgca aaagcagaaa gtttcgtgaa aatgtccatc tttgggaaat tttctaccct gctcttgagc ctgataaccc atgccaggtc ttatagattc ctgatctaga acctttccag gcaatctcag acctaatttc cttctgttct ccttgttctg ttctgggcca gtgaaggtcc ttgttctgat tttgaaacga tctgcaggtc ttgccagtga acccctggac aactgaccac acccacaagg catccaaagt ctgttggctt ccaatccatt tctgtgtcct gctggaggtt ttaacctaga caaggattcc gcttattcct tggtatggtg acagtgtctc tccatggcct gagcagggag attataacag ctgggttcgc aggagccagc cttggccctg ttgtaggctt gttctgttga gtggcacttg ctttgggtcc accgtctgtc tgctccctag aaaatgggct ggttcttttg gccctcttct ttctgaggcc cactttattc tgaggaatac agtgagcaga tatgggcagc agccaggtag ggcaaagggg tgaagcgcag gccttgctgg aaggctattt acttccatgc ttctcctttt cttactctat	A	Homo sapiens

				agtggcaaca ttttaaaagc ttttaactta gagattaggc tgaaaaaaat aagtaatgga attcaccttt gcatcttttg tgtctttctt atcatgattt ggcaaaatgc atcacctttg aaaatatttc acatattgga aaagtgcttt ttaatgtgta tatgaagcat taattacttg tcactttctt taccctgtct caatatttta agtgtgtgca attaaagatc aaatagatac at		
241	3848	C-C Chemokine Receptor 9	NP_006632.2	MADDYGSEST SSMEDYVNFN FTDFYCEKNN VRQFASHFLP PLYWLVFIVG ALGNSLVILV YWYCTRVKTM TDMFLLNLAI ADLLFLVTLP FWAIAAADQW KFQTFMCKVV NSMYKMNFYS CVLLIMCISV DRYIAIAQAM RAHTWREKRL LYSKMVCFTI WVLAAALCIP EILYSQIKEE SGIAICTMVY PSDESTKLKS AVLTLKVILG FFLPFVVMAC CYTIIIHTLI QAKKSSKHKA LKVTITVLTV FVLSQFPYNC ILLVQTIDAY AMFISNCAVS TNIDICFQVT QTIAFFHSCL NPVLYVFVGE RFRRDLVKTL KNLGCISQAQ WVSFTRREGS LKLSSMLLET TSGALSL	P	Homo sapiens
242	3849	G Protein-Coupled Receptor GPR1	NM_005279	atggaagatt tggaggaaac attatttgaa gaatttgaaa actattccta tgacctagac tattactctc tggagtctga tttggaggag aaagtccagc tgggagttgt tcactgggtc tccctggtgt tatattgttt ggcttttgtt ctgggaattc caggaaatgc catcgtcatt tggttcacgg ggctcaagtg gaagaagaca gtcaccactc tgtggttcct caatctagcc attgcggatt tcattttctt tctctttctg cccctgtaca tctcctatgt ggccatgaat ttccactggc cctttggcat ctggctgtgc aaagccaatt ccttcactgc ccagttgaac atgtttgcca gtgttttttt cctgacagtg atcagcctgg accactatat ccacttgatc catcctgtct tatctcatcg gcatcgaacc ctcaagaact ctctgattgt cattatattc atctggcttt tggcttctct aattggcggt cctgccctgt acttccggga cactgtggag ttcaataatc atactctttg ctataacaat tttcagaagc atgatcctga cctcactttg atcaggcacc atgttctgac ttgggtgaaa tttatcattg gctatctctt ccctttgcta acaatgagta tttgctactt gtgtctcatc ttcaaggtga agaagcgaac agtcctgatc tccagtaggc atttctggac aattctggtt gtggttgtgg cctttgtggt ttgctggact ccttatcacc tgtttagcat ttgggagctc accattcacc acaatagcta ttcccaccat gtgatgcagg ctggaatccc cctctccact ggtttggcat tcctcaatag ttgcttgaac cccatccttt atgtcctaat tagtaagaag ttccaagctc gcttccggtc ctcagttgct gagatactca agtacacact gtgggaagtc agctgttctg gcacagtgag tgaacagctc aggaactcag aaaccaagaa tctgtgtctc ctggaaacag ctcaataa	A	Homo sapiens
243	3849	G Protein-Coupled Receptor GPR1	NP_005270.1	MEDLEETLFE EFENYSYDLD YYSLESDLEE KVQLGVVHWV SLVLYCLAFV LGIPGNAIVI WFTGLKWKKT VTTLWFLNLA IADFIFLLFL PLYISYVAMN FHWPFGIWLC KANSFTAQLN MFASVFFLTV ISLDHYIHLI HPVLSHRHRT LKNSLIVIIF IWLLASLIGG PALYFRDTVE FNNHTLCYNN FQKHDPDLTL IRHHVLTWVK FIIGYLFPLL TMSICYLCLI FKVKKRTVLI SSRHFWTILV VVVAFVVCWT PYHLFSIWEL TIHHNSYSHH VMQAGIPLST GLAFLNSCLN PILYVLISKK FQARFRSSVA EILKYTLWEV SCSGTVSEQL RNSETKNLCL LETAQ	P	Homo sapiens
244	3850	G Protein-Coupled Receptor 10 (GPR10)	NM_004248	atggcctcat cgaccactcg gggccccagg gtttctgact tattttctgg gctgccgccg gcggtcacaa ctcccgccaa ccagagcgca gaggcctcgg cgggcaacgg gtcggtggct ggcgcggacg ctccagccgt cacgcccttc cagagcctgc agctggtgca tcagctgaag gggctgatcg tgctgctcta cagcgtcgtg gtggtcgtgg ggctggtggg caactgcctg ctggtgctgg tgatcgcgcg ggtgcgccgg ctgcacaacg tgacgaactt cctcatcggc aacctggcct tgtccgacgt gctcatgtgc accgcctgcg tgccgctcac gctggcctat	A	Homo sapiens

				gccttcgagc cacgcggctg ggtgttcggc ggcggcctgt gccacctggt cttcttcctg cagccggtca ccgtctatgt gtcggtgttc acgctcacca ccatcgcagt ggaccgctac gtcgtgctgg tgcacccgct gaggcggcgc atctcgctgc gcctcagcgc ctacgctgtg ctggccatct gggcgctgtc cgcggtgctg gcgctgcccg ccgccgtgca cacctatcac gtggagctca agccgcacga cgtgcgcctc tgcgaggagt tctggggctc ccaggagcgc cagcgccagc tctacgcctg gggctgctg ctggtcacct acctgctccc tctgctggtc atcctcctgt cttacgtccg ggtgtcagtg aagctccgca accgcgtggt gccgggctgc gtgacccaga gccaggccga ctgggaccgc gctcggcgcc ggcgcacctt ctgcttgctg gtggtggtcg tggtggtgtt cgccgtctgc tggctgccgc tgcacgtctt caacctgctg cgggacctcg acccccacgc catcgaccct tacgcctttg ggctggtgca gctgctctgc cactggctcg ccatgagttc ggcctgctac aaccccttca tctacgcctg gctgcacgac agcttccgcg aggagctgcg caaactgttg gtcgcttggc cccgcaagat agcccccat ggccagaata tgaccgtcag cgtggtcatc tga		
245	3850	G Protein-Coupled Receptor 10 (GPR10)	NP_004239.1	MASSTTRGPR VSDLFSGLPP AVTTPANQSA EASAGNGSVA GADAPAVTPF QSLQLVHQLK GLIVLLYSVV VVVGLVGNCL LVLVIARVRR LHNVTNFLIG NLALSDVLMC TACVPLTLAY AFEPRGWVFG GGLCHLVFFL QPVTVYVSVF TLTTIAVDRY VVLVHPLRRR ISLRLSAYAV LAIWALSAVL ALPAAVHTYH VELKPHDVRL CEEFWGSQER QRQLYAWGLL LVTYLLPLLV ILLSYVRVSV KLRNRVVPGC VTQSQADWDR ARRRRTFCLL VVVVVVFAVC WLPLHVFNLL RDLDPHAIDP YAFGLVQLLC HWLAMSSACY NPFIYAWLHD SFREELRKLL VAWPRKIAPH GQNMTVSVVI	P	Homo sapiens
246	3851	G Protein-Coupled Receptor GPR12	NM_005288	atgaatgaag acctgaaggt caatttaagc gggctgcctc gggattattt agatgccgct gctgcggaga acatctcggc tgctgtctcc tcccgggttc ctgccgtaga gccagagcct gagctcgtag tcaacccctg ggacattgtc ttgtgtacct cgggaaccct catctcctgt gaaaatgcca ttgtggtcct tatcatcttc cacaacccca gcctgcgagc acccatgttc ctgctaatag gcagcctggc tcttgcagac ctgctggccg gcattggact catcaccaat tttgtttttg cctacctgct tcagtcagaa gccaccaagc tggtcacgat cggcctcatt gtcgcctctt tctctgcctc tgtctgcagc ttgctggcta tcactgttga ccgctacctc tcactgtact acgctctgac gtaccattcg gagaggacgg tcacgtttac ctatgtcatg ctcgtcatgc tctgggggac ctccatctgc ctggggctgc tgcccgtcat gggctggaac tgcctccgag acgagtccac ctgcagcgtg gtcagaccgc tcaccaagaa caacgcggcc atcctctcgg tgtccttcct cttcatgttt gcgctcatgc ttcagctcta catccagatc tgtaagattg tgatgaggca cgcccatcag atagccctgc agcaccactt cctggccacg tcgcactatg tgaccacccg gaaaggggtc tccaccctgg ctatcatcct ggggacgttt gctgcttgct ggatgccttt caccctctat tccttgatag cggattacac ctacccctcc atctatacct acgccaccct cctgcccgcc acctacaatt ccatcatcaa ccctgtcata tatgctttca gaaaccaaga gatccagaaa gcgctctgtc tcatttgctg cggctgcatc ccgtccagtc tcgcccagag agcgcgctcg cccagtgatg tgtag	A	Homo sapiens
247	3851	G Protein-Coupled Receptor GPR12	NP_005279.1	MNEDLKVNLS GLPRDYLDAA AAENISAAVS SRVPAVEPEP ELVVNPWDIV LCTSGTLISC ENAIVVLIIF HNPSLRAPMF LLIGSLALAD LLAGIGLITN FVFAYLLQSE ATKLVTIGLI VASFSASVCS LLAITVDRYL SLYYALTYHS ERTVTFTYVM LVMLWGTSIC LGLLPVMGWN CLRDESTCSV VRPLTKNNAA ILSVSFLFMF ALMLQLYIQI CKIVMRHAHQ IALQHHFLAT	P	Homo sapiens

				SHYVTTRKGV STLAIILGTF AACWMPFTLY SLIADYTYPS IYTYATLLPA TYNSIINPVI YAFRNQEIQK ALCLICCGCI PSSLAQRARS PSDV		
248	3852	CX3C Chemokine Fractalkine Receptor 1	NM_001337	ggggcagatc cagattccct ttgcagtcca cgccaggcct tcaccatgga tcagttccct gaatcagtga cagaaaactt tgagtacgat gatttggctg aggcctgtta tattggggac atcgtggtct ttgggactgt gttcctgtcc atattctact ccgtcatctt tgccattggc ctggtgggaa atttgttggt agtgtttgcc ctcaccaaca gcaagaagcc caagagtgtc accgacattt acctcctgaa cctggccttg tctgatctgc tgtttgtagc cactttgccc ttctggactc actatttgat aaatgaaaag ggcctccaca atgccatgtg caaattcact accgccttct tcttcatcgg ctttttttgga agcatattct tcatcaccgt catcagcatt gataggtacc tggccatcgt cctggccgcc aactccatga acaaccggac cgtgcagcat ggcgtcacca tcagcctagg cgtctgggca gcagccattt tggtggcagc accccagttc atgttcacaa agcagaaaga aaatgaatgc cttggtgact accccgaggt ccttcaggaa atctggcccg tgctccgcaa tgtggaaaca aattttcttg gcttcctact ccccctgctc attatgagtt attgctactt cagaatcatc cagacgctgt ttcctgcaa gaaccacaag aaagccaaag ccattaaact gatccttctg gtggtcatcg tgtttttcct cttctggaca ccctacaacg ttatgatttt cctggagacg cttaagctct atgacttctt tcccagttgt gacatgagga aggatctgag gctggccctc agtgtgactg agacggttgc atttagccat tgttgcctga atcctctcat ctatgcattt gctggggaga agttcagaag ataccttttac cacctgtatg ggaaatgcct ggctgtcctg tgtgggcgct cagtccacgt tgatttctcc tcatctgaat cacaaaggag caggcatgga agtgttctga gcagcaattt tacttaccac acgagtgatg gagatgcatt gctccttctc tgaagggaat cccaaagcct tgtgtctaca gagaacctgg agttcctgaa cctgatgctg actagtgagg aagatttttg ttgttatttc ttacaggcac aaaatgatgg acccaatgca cacaaaacaa ccctagagtg ttgttgagaa ttgtgctcaa aatttgaaga atgaacaaat tgaactcttt gaatgacaaa gagtagacat ttctcttact gcaaatgtca tcagaacttt ttggtttgca gatgacaaaa attcaactca gactagttta gttaaatgag ggtggtgaat attgttcata ttgtggcaca agcaaaaagg gtgtctgagc cctcaaagtg aggggaacca gggcctgagc caagcta	A	Homo sapiens
249	3852	CX3C Chemokine Fractalkine Receptor 1	NP_001328.1	MDQFPESVTE NFEYDDLAEA CYIGDIVVFG TVFLSIFYSV IFAIGLVGNL LVVFALTNSK KPKSVTDIYL LNLALSDLLF VATLPFWTHY LINEKGLHNA MCKFTTAFFF IGFFGSIFFI TVISIDRYLA IVLAANSMNN RTVQHGVTIS LGVWAAAILV AAPQFMFTKQ KENECLGDYP EVLQEIWPVL RNVETNFLGF LLPLLIMSYC YFRIIQTLFS CKNHKKAKAI KLILLVVIVF FLFWTPYNVM IFLETLKLYD FFPSCDMRKD LRLALSVTET VAFSHCCLNP LIYAFAGEKF RRYLYHLYGK CLAVLCGRSV HVDFSSSESQ RSRHGSVLSS NFTYHTSDGD ALLLL	P	Homo sapiens
250	3853	G Protein-Coupled Receptor GPR15	NM_005290	atggacccag aagaaacttc agtttatttg gattattact atgctacgag cccaaactct gacatcaggg agacccactc ccatgttcct tacacctctg tcttccttcc agtcttttac acagctgtgt tcctgactgg agtgctgggg aaccttgttc tcatgggagc gttgcatttc aaacccggca gccgaagact gatcgacatc tttatcatca atctggctgc ctctgacttc atttttcttg tcacattgcc tctctgggtg gataaagaag catctctagg actgtggagg acgggctcct tcctgtgcaa agggagctcc tacatgatct ccgtcaatat gcactgcagt gtcctcctgc tcacttgcat gagtgttgac cgctacctgg ccattgtgtg gccagtcgta tccaggaaat tcagaaggac agactgtgca tatgtagtct gtgccagcat ctggtttatc	A	Homo sapiens

				tcctgcctgc tggggttgcc tactcttctg tccagggagc tcacgctgat tgatgataag ccatactgtg cagagaaaaa ggcaactcca attaaactca tatggtccct ggtggcctta attttcacct tttttgtccc tttgttgagc attgtgacct gctactgttg cattgcaagg aagctgtgtg cccattacca gcaatcagga aagcacaaca aaaagctgaa gaaatctata aagatcatct ttattgtcgt ggcagccttt cttgtctcct ggctgccctt caatactttc aagttcctgg ccattgtctc tgggttgcgg caagaacact atttaccctc agctattctt cagcttggta tggaggtgag tggacccttg gcatttgcca acagctgtgt caaccctttc atttactata tcttcgacag ctacatccgc cgggccattg tccactgctt gtgcccttgc ctgaaaaact atgactttgg gagtagcact gagacatcag atagtcacct cactaaggct ctctccacct tcattcatgc agaagatttt gccaggagga ggaagaggtc tgtgtcactc taa		
251	3853	G Protein-Coupled Receptor GPR15	NP_005281.1	MDPEETSVYL DYYYATSPNS DIRETHSHVP YTSVFLPVFY TAVFLTGVLG NLVLMGALHF KPGSRRLIDI FIINLAASDF IFLVTLPLWV DKEASLGLWR TGSFLCKGSS YMISVNMHCS VLLLTCMSVD RYLAIVWPVV SRKFRRTDCA YVVCASIWFI SCLLGLPTLL SRELTLIDDK PYCAEKKATP IKLIWSLVAL IFTFFVPLLS IVTCYCCIAR KLCAHYQQSG KHNKKLKKSI KIIFIVVAAF LVSWLPFNTF KFLAIVSGLR QEHYLPSAIL QLGMEVSGPL AFANSCVNPF IYYIFDSYIR RAIVHCLCPC LKNYDFGSST ETSDSHLTKA LSTFIHAEDF ARRRKRSVSL	P	Homo sapiens
252	3854	G Protein-Coupled Receptor GPR18	NM_005292	gaaagagaca aagcagcaat taaagtcagc ccagcaccaa ctccgacgcc aagcgttaca ctggaaacta ctttttaaag caacaaaaga gtctaaaaca aaatacaaca tttcttaaat acactgtttc cagaaagagc tattttaaca gaagcaactc aaagatatcc cttcgacaga agtggaagtg ctgaaaaatg ctcatctctc acacagactt ttgatggaca ggagtttcta agtatcatgc ctaccaacaa gctgtaaaat gatcaccctg aacaatcaag atcaacctgt ccctttttaac agctcacatc cagatgaata caaaattgca gcccttgtct tctatagctg tatcttcata attggattat ttgttaacat cactgcatta tgggttttca gttgtaccac caagaagaga accacggtaa ccatctatat gatgaatgtg gcattagtgg acttgatatt tataatgact ttaccctttc gaatgtttta ttatgcaaaa gatgaatggc catttggaga gtacttctgc cagattcttg gagctctcac agtgttttac ccaagcattg ctttatggct tcttgccttt attagtgctg acagatacat ggccattgta cagccgaagt acgccaaaga acttaaaaac acgtgcaaag ccgtgctggc gtgtgtggga gtctggataa tgaccctgac cacgaccacc cctctgctac tgctctataa agacccagat aaagactcca ctcccgccac ctgcctcaag atttctgaca tcatctatct aaaagctgtg aacgtgctga acctcactcg actgacattt tttttcttga ttcctttgtt catcatgatt gggtgctact tggtcattat tcataatctc cttcacggca ggacgtctaa gctgaaaccc aaagtcaagg agaagtccat aaggatcatc atcacgctgc tggtgcaggt gctcgtctgc tttatgccct tccacatctg tttcgctttc ctgatgctgg gaacggggga gaacagttac aatccctggg gagcctttac caccttcctc atgaacctca gcacgtgtct ggatgtgatt ctctactaca tcgtttcaaa acaatttcag gctcgagtca ttagtgtcat gctataccgt aattaccttc gaagcatgcg cagaaaaagt ttccgatctg gtagtctacg gtcactaagc aatataaaca gtgaaatgtt atgaataata aggttctttc atttcaatcc catcaaaatt cacttcacta actactctgg cgtcaatgga tattctgtat aatactatca agtccctttt ctcttgaaaa aataaattca ttatcttcat tttaaaaaaa aaaaaaaaa	A	Homo sapiens

253	3854	G Protein-Coupled Receptor GPR18	NP_005283.1	MITLNNQDQP VPFNSSHPDE YKIAALVFYS CIFIIGLFVN ITALWVFSCT TKKRTTVTIY MMNVALVDLI FIMTLPFRMF YYAKDEWPFG EYFCQILGAL TVFYPSIALW LLAFISADRY MAIVQPKYAK ELKNTCKAVL ACVGVWIMTL TTTTPLLLLY KDPDKDSTPA TCLKISDIIY LKAVNVLNLT RLTFFFLIPL FIMIGCYLVI IHNLLHGRTS KLKPKVKEKS IRIIITLLVQ VLVCFMPFHI CFAFLMLGTG ENSYNPWGAF TTFLMNLSTC LDVILYYIVS KQFQARVISV MLYRNYLRSM RRKSFRSGSL RSLSNINSEM L	P	Homo sapiens
254	3855	G Protein-Coupled Receptor GPR19	NM_006143	aattaagaga aaaaaagtga atatggtttt tgctcacaga atggataaca gcaagccaca tttgattatt cctacacttc tggtgcccct ccaaaaccgc agctgcactg aaacagccac acctctgcca agccaatacc tgatggaatt aagtgaggag cacagttgga tgagcaacca aacagacctt cactatgtgc tgaaacccgg ggaagtggcc acagccagca tcttctttgg gattctgtgg ttgttttcta tcttcggcaa ttccctggtt tgtttggtca tccataggag taggaggact cagtctacca ccaactactt tgtggtctcc atggcatgtg ctgaccttct catcagcgtt gccagcacgc ctttcgtcct gctccagttc accactggaa ggtggacgct gggtagtgca acgtgcaagg ttgtgcgata ttttcaatat ctcactccag gtgtccagat ctacgttctc ctctccatct gcatagaccg gttctacacc atcgtctatc ctctgagctt caaggtgtcc agagaaaaag ccaagaaaat gattgcggca tcgtggatct ttgatgcagg ctttgtgacc cctgtgctct ttttctatgg ctccaactgg gacagtcatt gtaactattt cctcccctcc tcttgggaag gcactgccta cactgtcatc cacttcttgg tgggctttgt gattccatct gtcctcataa ttttatttta ccaaaaggtc ataaaatata tttggagaat aggcacagat ggccgaacgg tgaggaggac aatgaacatt gtccctcgga caaaagtgaa aactatcaag atgttcctca ttttaaatct gttgtttttg ctctcctggc tgccttttca tgtagctcag ctatggcacc cccatgaaca agactataag aaaagttccc ttgttttcac agctatcaca tggatatcct ttagttcttc agcctctaaa cctactctgt attcaattta taatgccaat tttcggagag ggatgaaaga gactttttgc atgtcctcta tgaaatgtta ccgaagcaat gcctatacta tcacaacaag ttcaaggatg gccaaaaaaa actacgttgg catttcagaa atcccttcca tggccaaaac tattaccaaa gactcgatct atgactcatt tgacagagaa gccaaggaaa aaaagcttgc ttggcccatt aactcaaatc caccaaatac ttttgtctaa gttctcattc tttcaattgt tatgcaccag agattaaaaa gctttaacta taaaaacaga agctatttac atatttgttt tcactcaact ttccaaggga aatgttttat tttgtaaaat gcattcattt gtttactgt	A	Homo sapiens
255	3855	G Protein-Coupled Receptor GPR19	NP_006134.1	MVFAHRMDNS KPHLIIPTLL VPLQNRSCTE TATPLPSQYL MELSEEHSWM SNQTDLHYVL KPGEVATASI FFGILWLFSI FGNSLVCLVI HRSRRTQSTT NYFVVSMACA DLLISVASTP FVLLQFTTGR WTLGSATCKV VRYFQYLTPG VQIYVLLSIC IDRFYTIVYP LSFKVSREKA KKMIAASWIF DAGFVTPVLF FYGSNWDSHC NYFLPSSWEG TAYTVIHFLV GFVIPSVLII LFYQKVIKYI WRIGTDGRTV RRTMNIVPRT KVKTIKMFLI LNLLFLLSWL PFHVAQLWHP HEQDYKKSSL VFTAITWISF SSSASKPTLY SIYNANFRRG MKETFCMSSM KCYRSNAYTI TTSSRMAKKN YVGISEIPSM AKTITKDSIY DSFDREAKEK KLAWPINSNP PNTFV	P	Homo sapiens
256	3856	G Protein-Coupled Receptor GPR2/CCR10	NM_016602	agagatgggg acggaggcca cagagcaggt ttcctggggc cattactctg gggatgaaga ggacgcatac tcggctgagc cactgccgga gctttgctac aaggccgatg tccaggcctt cagccgggcc ttccaaccca gtgtctccct gaccgtggct gcgctgggtc tggccggcaa tggcctggtc ctggccaccc acctggcagc ccgacgcgca gcgcgctcgc ccacctctgc	A	Homo sapiens

				ccacctgctc cagctggccc tggccgacct cttgctggcc ctgactctgc ccttcgcggc agcaggggct cttcagggct ggagtctggg aagtgccacc tgccgcacca tctctggcct ctactcggcc tccttccacg ccggcttcct cttcctggcc tgtatcagcg ccgaccgcta cgtggccatc gcgcgagcgc tcccagccgg gccgcggccc tccactcccg gccgcgcaca cttggtctcc gtcatcgtgt ggctgctgtc actgctcctg gcgctgcctg cgctgctctt cagccaggat gggcagcggg aaggccaacg acgctgtcgc ctcatcttcc ccgagggcct cacgcagacg gtgaaggggg cgagcgccgt ggcgcaggtg gccctgggct tcgcgctgcc gctgggcgtc atggtagcct gctacgcgct tctgggccgc acgctgctgg ccgccagggg gcccgagcgc cggcgtgcgc tgcgcgtcgt ggtggctctg gtggcggcct tcgtggtgct gcagctgccc tacagcctcg ccctgctgct ggatactgcc gatctactgg ctgcgcgcga gcggagctgc cctgccagca aacgcaagga tgtcgcactg ctggtgacca gcggcttggc cctcgcccgc tgtggcctca atcccgttct ctacgccttc ctgggcctgc gcttccgcca ggacctgcgg aggctgctac ggggtgggag ctcgccctca gggcctcaac cccgccgcgg ctgccccgc cggccccgcc tttcttcctg ctcagctccc acggagaccc acagtctctc ctgggacaac tagggctgcg aatctagagg agggggcagg ctgagggtcg tgggaaaggg gagtaggtgg gggaacactg agaaagaggc agggacctaa agggactacc tctgtgcctt gccacattaa attgataaca tggaaatgaa aaaaaaaaaa aaaa		
257	3856	G Protein-Coupled Receptor GPR2/CCR10	NP_057686.1	MGTEATEQVS WGHYSGDEED AYSAEPLPEL CYKADVQAFS RAFQPSVSLT VAALGLAGNG LVLATHLAAR RAARSPTSAH LLQLALADLL LALTLPFAAA GALQGWSLGS ATCRTISGLY SASFHAGFLF LACISADRYV AIARALPAGP RPSTPGRAHL VSVIVWLLSL LLALPALLFS QDGQREGQRR CRLIFPEGLT QTVKGASAVA QVALGFALPL GVMVACYALL GRTLLAARGP ERRRALRVVV ALVAAFVVLQ LPYSLALLLD TADLLAARER SCPASKRKDV ALLVTSGLAL ARCGLNPVLY AFLGLRFRQD LRRLLRGGSS PSGPQPRRGC PRRPRLSSCS APTETHSLSW DN	P	Homo sapiens
258	3857	G Protein-Coupled Receptor GPR20	NM_005293	atgccctctg tgtctccagc ggggccctcg gccggggcag tccccaatgc caccgcagtg acaacagtgc ggaccaatgc cagcgggctg gaggtgcccc tgttccacct gtttgcccgg ctggacgagg agctgcatgg caccttccca ggcctgtgcg tggcgctgat ggcggtgcac ggagccatct tcctggcagg gctggtgctc aacgggctgg cgctgtacgt cttctgctgc cgcacccggg ccaagacacc ctcagtcatc tacaccatca acctggtggt gaccgatcta ctggtagggc tgtccctgcc cacgcgcttc gctgtgtact acggcgccag ggctgcctg cgctgtgcct tcccgcacgt cctcggttac ttcctcaaca tgcactgctc catcctcttc ctcacctgca tctgcgtgga ccgctacctg gccatcgtgc ggcccgaagc tcccgccgcc tgccgccagc ctgcctgtgc cagggccgtg tgcgccttcg tgtggctggc cgccggtgcc gtcaccctgt cggtgctggg cgtgacaggc agccggccct gctgccgtgt ctttgcgctg actgtcctgg agttcctgct gcccctgctg gtcatcagcg tgtttaccgg ccgcatcatg tgtgcactgt cgcggccggg tctgctccac cagggtcgcc agcgccgcgt gcgggccatg cagctcctgc tcacggtgct catcatcttt ctcgtctgct tcacgccctt ccacgcccgc caagtggccg tggcgctgtg gcccgacatg ccacaccaca cgagcctcgt ggtctaccac gtggccgtga ccctcagcag cctcaacagc tgcatggacc ccatcgtcta ctgcttcgtc accagtggct tccaggccac cgtccgaggc ctcttcggcc agcacggaga gcgtgagccc agcagcggtg acgtggtcag catgcacagg agctccaagg gctcaggccg tcatcacatc	A	Homo sapiens

				ctcagtgccg gccctcacgc cctcacccag gccctggcta atgggcccga ggcttag		
259	3857	G Protein-Coupled Receptor GPR20	NP_005284.1	MPSVSPAGPS AGAVPNATAV TTVRTNASGL EVPLFHLFAR LDEELHGTFP GLCVALMAVH GAIFLAGLVL NGLALYVFCC RTRAKTPSVI YTINLVVTDL LVGLSLPTRF AVYYGARGCL RCAFPHVLGY FLNMHCSILF LTCICVDRYL AIVRPEAPAA CRQPACARAV CAFVWLAAGA VTLSVLGVTG SRPCCRVFAL TVLEFLLPLL VISVFTGRIM CALSRPGLLH QGRQRRVRAM QLLLTVLIIF LVCFTPFHAR QVAVALWPDM PHHTSLVVYH VAVTLSSLNS CMDPIVYCFV TSGFQATVRG LFGQHGEREP SSGDVVSMHR SSKGSGRHHI LSAGPHALTQ ALANGPEA	P	Homo sapiens
260	3858	G Protein-Coupled Receptor GPR21	NM_005294	atgaactcca ccttggatgg taatcagagc agccaccctt tttgcctctt ggcatttggc tatttggaaa ctgtcaattt ttgcctttttg gaagtattga ttattgtctt tctaactgta ttgattattt ctggcaacat cattgtgatt tttgtatttc actgtgcacc tttgttgaac catcacacta caagttattt tatccagact atggcatatg ctgacctttt tgttggggtg agctgcgtgg tcccttcttt atcactcctc catcaccccc ttccagtaga ggagtccttg acttgccaga tatttggttt tgtagtatca gttctgaaga gcgtctccat ggcttctctg gcctgtatca gcattgatag atacattgcc attactaaac ctttaaccta taatactctg gttacaccct ggagactacg cctgtgtatt ttcctgattt ggctatactc gaccctggtc ttcctgcctt ccttttcca ctggggcaaa cctggatatc atggagatgt gtttcagtgg tgtgcggagt cctggcacac cgactcctac ttcaccctgt tcatcgtgat gatgttatat gccccagcag cccttattgt ctgcttcacc tatttcaaca tcttccgcat ctgccaacag cacacaaagg atatcagcga aaggcaagcc cgcttcagca gccagagtgg ggagactggg gaagtgcagg cctgtcctga taagcgctat gccatggtcc tgtttcgaat cactagtgta ttttacatcc tctggttgcc atatatcatc tacttcttgt tggaaagctc cactggccac agcaaccgct tcgcatcctt cttgaccacc tggcttgcta ttagtaacag tttctgcaac tgtgtaattt atagtctctc caacagtgta ttccaaagag gactaaagcg cctctcaggg gctatgtgta cttcttgtgc aagtcagact acagccaacg acccttacac agttagaagc aaaggccctc ttaatggatg tcatatctga	A	Homo sapiens
261	3858	G Protein-Coupled Receptor GPR21	NP_005285.1	MNSTLDGNQS SHPFCLLAFG YLETVNFCLL EVLIIVFLTV LIISGNIIVI FVFHCAPLLN HHTTSYFIQT MAYADLFVGV SCVVPSLSLL HHPLPVEESL TCQIFGFVVS VLKSVSMASL ACISIDRYIA ITKPLTYNTL VTPWRLRLCI FLIWLYSTLV FLPSFFHWGK PGYHGDVFQW CAESWHTDSY FTLFIVMMLY APAALIVCFT YFNIFRICQQ HTKDISERQA RFSSQSGETG EVQACPDKRY AMVLFRITSV FYILWLPYII YFLLESSTGH SNRFASFLTT WLAISNSFCN CVIYSLSNSV FQRGLKRLSG AMCTSCASQT TANDPYTVRS KGPLNGCHI	P	Homo sapiens
262	3859	G Protein-Coupled Receptor GPR22	NM_005295	atgtgttttt ctcccattct ggaaatcaac atgcagtctg aatctaacat tacagtgcga gatgacattg atgacatcaa caccaatatg taccaaccac tatcatatcc gttaagcttt caagtgtctc tcaccggatt tcttatgtta gaaattgtgt tgggacttgg cagcaacctc actgtattgg tactttactg catgaaatcc aacttaatca actctgtcag taacattatt acaatgaatc ttcatgtact tgatgtaata atttgtgtgg gatgtattcc tctaactata gttatccttc tgctttcact ggagagtaac actgctctca tttgctgttt ccatgaggct tgtgtatctt ttgcaagtgt ctcaacagca atcaacgttt ttgctatcac tttggacaga tatgacatct ctgtaaaacc tgcaaaccga attctgacaa tgggcagagc tgtaatgtta atgatatcca tttggatttt ttcttttttc tctttcctga ttcctttat tgaggtaaat	A	Homo sapiens

				tttttcagtc ttcaaagtgg aaatacctgg gaaaacaaga cacttttatg tgtcagtaca aatgaatact acactgaact gggaatgtat tatcacctgt tagtacagat cccaatattc tttttcactg ttgtagtaat gttaatcaca tacaccaaaa tacttcaggc tcttaatatt cgaataggca caagattttc aacagggcag aagaagaaag caagaaagaa aaagacaatt tctctaacca cacaacatga ggctacagac atgtcacaaa gcagtggtgg gagaaatgta gtctttggtg taagaacttc agtttctgta ataattgccc tccggcgagc tgtgaaacga caccgtgaac gacgagaaag acaaaagaga gtcttcagga tgtctttatt gattatttct acatttcttc tctgctggac accaatttct gttttaaata ccaccatttt atgtttaggc ccaagtgacc ttttagtaaa attaagattg tgttttttag tcatggctta tggaacaact atatttcacc ctctattata tgcattcact agacaaaaat ttcaaaaggt cttgaaaagt aaaatgaaaa agcgagttgt ttctatagta gaagctgatc ccctgcctaa taatgctgta atacacaact cttggataga tcccaaaaga aacaaaaaaa ttacctttga agatagtgaa ataagagaaa aacgtttagt gcctcaggtt gtcacagact ag		
263	3859	G Protein-Coupled Receptor GPR22	NP_005286.1	MCFSPILEIN MQSESNITVR DDIDDINTNM YQPLSYPLSF QVSLTGFLML EIVLGLGSNL TVLVLYCMKS NLINSVSNII TMNLHVLDVI ICVGCIPLTI VILLLSLESN TALICCFHEA CVSFASVSTA INVFAITLDR YDISVKPANR ILTMGRAVML MISIWIFSFF SFLIPFIEVN FFSLQSGNTW ENKTLLCVST NEYYTELGMY YHLLVQIPIF FFTVVVMLIT YTKILQALNI RIGTRFSTGQ KKKARKKKTI SLTTQHEATD MSQSSGGRNV VFGVRTSVSV IIALRRAVKR HRERRERQKR VFRMSLLIIS TFLLCWTPIS VLNTTILCLG PSDLLVKLRL CFLVMAYGTT IFHPLLYAFT RQKFQKVLKS KMKKRVVSIV EADPLPNNAV IHNSWIDPKR NKKITFEDSE IREKRLVPQV VTD	P	Homo sapiens
264	3860	G Protein-Coupled Receptor SLC/MCH1	NM_005297	atgttgtgtc cttccaagac agatggctca gggcactctg gtaggattca ccaggaaact catggagaag ggaaaaggga caagattagc aacagtgaag ggagggagaa tggtgggaga ggattccaga tgaacggtgg gtcgctggag gctgagcatg ccagcaggat gtcagttctc agagcaaagc ccatgtcaaa cagccaacgc ttgctccttc tgtccccagg atcacctcct cgcacgggga gcatctccta catcaacatc atcatgcctt cggtgttcgg caccatctgc ctcctgggca tcatcgggaa ctccacggtc atcttcgcgg tcgtgaagaa gtccaagctg cactggtgca acaacgtccc cgacatcttc atcatcaacc tctcggtagt agatctcctc tttctcctgg gcatgccctt catgatccac cagctcatgg gcaatggggt gtggcacttt ggggagacca tgtgcaccct catcacggcc atggatgcca atagtcagtt caccagcacc tacatcctga ccgccatggc cattgaccgc tacctggcca ctgtccaccc catctcttcc acgaagttcc ggaagccctc tgtggccacc ctggtgatct gcctcctgtg ggccctctcc ttcatcagca tcacccctgt gtggctgtat gccagactca tcccccttccc aggaggtgca gtgggctgcg gcatacgcct gcccaaccca gacactgacc tctactggtt caccctgtac cagtttttcc tggcctttgc cctgcctttt gtggtcatca cagccgcata cgtgaggatc ctgcagcgca tgacgtcctc agtggccccc gcctcccagc gcagcatccg gctgcggaca aagagggtga cccgcacagc catcgccatc tgtctggtct tctttgtgtg ctgggcaccc tactatgtgc tacagctgac ccagttgtcc atcagccgcc cgaccctcac ctttgtctac ttatacaatg cggccatcag cttgggctat gccaacagct gcctcaaccc ctttgtgtac atcgtgctct gtgagacgtt ccgcaaacgc ttggtcctgt cggtgaagcc tgcagcccag gggcagcttc gcgctgtcag caacgctcag acggctgacg aggagaggac agaaagcaaa	A	Homo sapiens

				ggcacctga		
265	3860	G Protein-Coupled Receptor SLC/MCH1	NP_005288.1	MLCPSKTDGS GHSGRIHQET HGEGKRDKIS NSEGRENGGR GFQMNGGSLE AEHASRMSVL RAKPMSNSQR LLLLSPGSPP RTGSISYINI IMPSVFGTIC LLGIIGNSTV IFAVVKKSKL HWCNNVPDIF IINLSVVDLL FLLGMPFMIH QLMGNGVWHF GETMCTLITA MDANSQFTST YILTAMAIDR YLATVHPISS TKFRKPSVAT LVICLLWALS FISITPVWLY ARLIPFPGGA VGCGIRLPNP DTDLYWFTLY QFFLAFALPF VVITAAYVRI LQRMTSSVAP ASQRSIRLRT KRVTRTAIAI CLVFFVCWAP YYVLQLTQLS ISRPTLTFVY LYNAAISLGY ANSCLNPFVY IVLCETFRKR LVLSVKPAAQ GQLRAVSNAQ TADEERTESK GT	P	Homo sapiens
266	3861	G Protein-Coupled Receptor GPR25	NM_005298	atggcccccca cagagccctg gagccccagc ccggggtcag cgccctggga ctactcgggg ttggacggcc tggaggagct ggagctgtgt ccggccgggg acctgcccta cggctacgtc tacatccccg cgctctacct ggcggccttc gccgtgggcc tgctgggcaa cgcctttgtg gtgtggctgc tggccgggcg gcggggcccg cggcggctgg tggatacctt cgtgctgcac ctggcggcag ctgacctggg cttcgtgctc acgctgccgc tgtgggccgc ggcggcggct aggcggccgt ggccgttcgg cgatggcctc tgcaagctca gcacgttcgc gctggcgggc acgcgctcgg cgggcgcgct gctgctggcg ggcatgagcg tggaccgcta cctggccgtg gtgaagctgc tcgaggcgag gccactgcgc accccgcgct gcgccgtggc ctcgtgctgc ggcgtctggg ccgtggcgct gctggccggc ctgccctccc tggtctaccg ggggttgcag cccctgcctg gggccagga cagccagtgc ggcgaggagc cctcccacgc cttccagggc ctcagcttgc tgctgctgct gctgaccttc gtgctgcccc tggtcgtcac cctcttctgc tactgccgca tctcgcgccg cctgcgacgg ccgccgcacg tgggtcgggc ccggaggaac tcgctgcgca tcatcttcgc catcgagagc acgtttgtgg gctcctggct gcccttcagc gccctgcggg ccgtcttcca cctggcgcgt ctgggggcgc tgccgctgcc gtgcccctg ctgctggcgc tgcgctgggg cctcaccatt gccacctgcc tggccttcgt caacagctgc gccaacccgc tcatctacct cctgctggac cgctcattcc gagcccgggc gctggacggg gcctgcgggc gcaccggccg cctggcgcga aggatcagct cagcctcctc gctctccagg gacgacagtt ccgtgttccg ttgccgggcc caggccgcga acactgcctc ggcctcctgg tag	A	Homo sapiens
267	3861	G Protein-Coupled Receptor GPR25	NP_005289.1	MAPTEPWSPS PGSAPWDYSG LDGLEELELC PAGDLPYGYV YIPALYLAAF AVGLLGNAFV VWLLAGRRGP RRLVDTFVLH LAAADLGFVL TLPLWAAAAA RRPWPFGDGL CKLSTFALAG TRSAGALLLA GMSVDRYLAV VKLLEARPLR TPRCAVASCC GVWAVALLAG LPSLVYRGLQ PLPGGQDSQC GEEPSHAFQG LSLLLLLLTF VLPLVVTLFC YCRISRRLRR PPHVGRARRN SLRIIFAIES TFVGSWLPFS ALRAVFHLAR LGALPLPCPL LLALRWGLTI ATCLAFVNSC ANPLIYLLLD RSFRARALDG ACGRTGRLAR RISSASSLSR DDSSVFRCRA QAANTASASW	P	Homo sapiens
268	3862	G Protein-Coupled Receptor GPR3	NM_005281	atgatgtggg gtgcaggcag ccctctggcc tggctctcag ctggctcagg caacgtgaat gtaagcagcg tgggcccagc agagggcccc acaggtccag ccgcaccact gccctcgcct aaggcctggg atgtggtgct ctgcatctca ggcaccctgg tgtcctgcga gaatgcgcta gtggtggcca tcatcgtggg cactcctgcc ttccgtgccc ccatgttcct gctggtgggc agcctggccg tggcagacct gctggcaggc ctgggcctgg tcctgcactt tgctgctgtc ttctgcatcg gctcagcgga gatgagcctg gtgctggttg gcgtgctggc aatggccttt accgccagca tcggcagtct actggccatc actgtcgacc gctacctttc tctgtacaat	A	Homo sapiens

				gccctcacct actattcaga gacaacagtg acacggacct atgtgatgct ggccttagtg tggggaggtg ccctgggcct ggggctgctg cctgtgctgg cctggaactg cctggatggc ctgaccacat gtggcgtggt ttatccactc tccaagaacc atctggtagt tctggccatt gccttcttca tggtgtttgg catcatgctg cagctctacg cccaaatctg ccgcatcgtc tgccgccatg cccagcagat tgcccttcag cggcacctgc tgcctgcctc ccactatgtg gccacccgca agggcattgc cacactggcc gtggtgcttg gagcctttgc cgcctgctgg ttgcccttca ctgtctactg cctgctgggt gatgcccact ctccacctct ctacacctat cttaccttgc tccctgccac ctacaactcc atgatcaacc ctatcatcta cgccttccgc aaccaggatg tgcagaaagt gctgtgggct gtctgctgct gctgttcctc ttccaagatc cccttccgat cccgctcccc cagtgatgtc tag		
269	3862	G Protein-Coupled Receptor GPR3	NP_005272.1	MMWGAGSPLA WLSAGSGNVN VSSVGPAEGP TGPAAPLPSP KAWDVVLCIS GTLVSCENAL VVAIIVGTPA FRAPMFLLVG SLAVADLLAG LGLVLHFAAV FCIGSAEMSL VLVGVLAMAF TASIGSLLAI TVDRYLSLYN ALTYYSETTV TRTYVMLALV WGGALGLGLL PVLAWNCLDG LTTCGVVYPL SKNHLVVLAI AFFMVFGIML QLYAQICRIV CRHAQQIALQ RHLLPASHYV ATRKGIATLA VVLGAFAACW LPFTVYCLLG DAHSPPLYTY LTLLPATYNS MINPIIYAFR NQDVQKVLWA VCCCCSSSKI PFRSRSPSDV	P	Homo sapiens
270	3863	G Protein-Coupled Receptor GPR31	NM_005299	atgccattcc caaactgctc agcccccagc actgtggtgg ccacagctgt gggtgtcttg ctggggctgg agtgtgggct gggtctgctg ggcaacgcgg tggcgctgtg gaccttcctg ttccgggtca gggtgtggaa gccgtacgct gtctacctgc tcaacctggc cctggctgac ctgctgttgg ctgcgtgcct gcctttcctg gccgccttct acctgagcct ccaggcttgg catctgggcc gtgtgggctg ctgggccctg cgcttcctgc tggacctcag ccgcagcgtg gggatggcct tcctggccgc cgtggctttg gaccggtacc tccgtgtggt ccaccctcgg cttaaggtca acctgctgtc tcctcaggcg gccctggggg tctcgggcct cgtctggctc ctgatggtcg ccctcacctg cccgggcttg ctcatctctg aggccgccca gaactccacc aggtgccaca gtttctactc cagggcagac ggctccttca gcatcatctg gcaggaagca ctctcctgcc ttcagtttgt cctccccttt ggcctcatcg tgttctgcaa tgcaggcatc atcagggctc tccagaaaag actccgggag cctgagaaac agcccaagct tcagcgggcc caggcactgg tcaccttggt ggtggtgctg tttgctctgt gctttctgcc ctgcttcctg gccagagtcc tgatgcacat cttccagaat ctggggagct gcagggccct ttgtgcagtg gctcatacct cggatgtcac gggcagcctc acctacctgc acagtgtcgt caaccccgtg gtatactgct tctccagccc caccttcagg agctcctatc ggagggtctt ccacaccctc cgaggcaaag ggcaggcagc agagccccca gatttcaacc ccagagactc ctattcctga	A	Homo sapiens
271	3863	G Protein-Coupled Receptor GPR31	NP_005290.1	MPFPNCSAPS TVVATAVGVL LGLECGLGLL GNAVALWTFL FRVRVWKPYA VYLLNLALAD LLLAACLPFL AAFYLSLQAW HLGRVGCWAL RFLLDLSRSV GMAFLAAVAL DRYLRVVHPR LKVNLLSPQA ALGVSGLVWL LMVALTCPGL LISEAAQNST RCHSFYSRAD GSFSIIWQEA LSCLQFVLPF GLIVFCNAGI IRALQKRLRE PEKQPKLQRA QALVTLVVVL FALCFLPCFL ARVLMHIFQN LGSCRALCAV AHTSDVTGSL TYLHSVVNPV VYCFSSPTFR SSYRRVFHTL RGKGQAAEPP DFNPRDSYS	P	Homo sapiens
272	3864	G Protein-Coupled Receptor	NM_005282	ctggtgacct tacttatctc tgttgctttc tggggtccta ggaaatgcca gcactcccac ccacattgcc tgaactttcc aacactccct agctgcgctg tgtcctatct caacacttcc tcatgtattt cttgtgtctt ctagaacatt cccccgccat tattacttca atatggctac	A	Homo sapiens

GPR4

acatacttcc taattgccct gcaaaccatc tccttctcac cattgcccag cgatgctttc
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agggcactgt gctgggtggg gctggggaca caacaatgac tgaggcagcc tggccttgcc

				ttcacagggc tcaccataca caagtaaata aaaaatatgt aatgtttgga attgct		
273	3864	G Protein-Coupled Receptor GPR4	NP_005273.1	MGNHTWEGCH VDSRVDHLFP PSLYIFVIGV GLPTNCLALW AAYRQVQQRN ELGVYLMNLS IADLLYICTL PLWVDYFLHH DNWIHGPGSC KLFGFIFYTN IYISIAFLCC ISVDRYLAVA HPLRFARLRR VKTAVAVSSV VWATELGANS APLFHDELFR DRYNHTFCFE KFPMEGWVAW MNLYRVFVGF LFPWALMLLS YRGILRAVRG SVSTERQEKA KIKRLALSLI AIVLVCFAPY HVLLLSRSAI YLGRPWDCGF EERVFSAYHS SLAFTSLNCV ADPILYCLVN EGARSDVAKA LHNLLRFLAS DKPQEMANAS LTLETPLTSK RNSTAKAMTG SWAATPPSQG DQVQLKMLPP AQ	P	Homo sapiens
274	3866	G Protein-Coupled Receptor GPR6	NM_005284	atgaacgcga gcgccgcctc gctcaacgac tcccaggtgg tggtagtggc ggccgaagga gcggcggcgg cggccacagc agcagggggg ccggacacgg gcgaatgggg accccctgct gcggcggctc taggagccgg cggcggagct aatgggtctc tggagctgtc ctcgcagctg tcggctgggc caccgggact cctgctgcca gcggtgaatc cgtgggacgt gctcctgtgc gtgtcgggga cagtgatcgc tggagaaaac gcgctggtgg tggcgctcat cgcgtccact ccggcgctgc gcacgcccat gttcgtgctg gtaggcagcc tggccaccgc tgacctgttg gcgggctgtg gcctcatctt gcactttgtg ttccagtact tggtgccctc ggagactgtg agtctgctca cggtgggctt cctcgtggcc tccttcgccg cctctgtcag cagcctgctg gccattacgg tggaccgcta cctgtccctg tataacgcgc tcacctatta ctcgcgccgg accctgttgg gcgtgcacct cctgcttgcc gccacttgga ccgtgtccct aggcctgggg ctgctgcccg tgctgggctg gaactgcctg gcagagcgcg ccgcctgcag cgtggtgcgc ccgctggcgc gcagccacgt ggctctgctc tccgccgcct tcttcatggt cttcggcatc atgctgcacc tgtacgtgcg catctgccag gtggtctggc gccacgcgca ccagatcgcg ctgcagcagc actgcctggc gccaccccat ctcgctgcca ccagaaaggg tgtgggtaca ctggctgtgg tgctgggcac tttcggcgcc agctggctgc ccttcgccat ctattgcgtg gtgggcagcc atgaggaccc ggcggtctac acttacgcca ccctgctgcc cgccacctac aactccatga tcaatcccat catctatgcc ttccgcaacc aggagatcca gcgcgccctg tggctcctgc tctgtggctg tttccagtcc aaagtgccct ttcgttccag gtctcccagc gaggtctga	A	Homo sapiens
275	3866	G Protein-Coupled Receptor GPR6	NP_005275.1	MNASAASLND SQVVVVAAEG AAAAATAAGG PDTGEWGPPA AAALGAGGGA NGSLELSSQL SAGPPGLLLP AVNPWDVLLC VSGTVIAGEN ALVVALIAST PALRTPMFVL VGSLATADLL AGCGLILHFV FQYLVPSETV SLLTVGFLVA SFAASVSSLL AITVDRYLSL YNALTYYSRR TLLGVHLLLA ATWTVSLGLG LLPVLGWNCL AERAACSVVR PLARSHVALL SAAFFMVFGI MLHLYVRICQ VVWRHAHQIA LQQHCLAPPH LAATRKGVGT LAVVLGTFGA SWLPFAIYCV VGSHEDPAVY TYATLLPATY NSMINPIIYA FRNQEIQRAL WLLLCGCFQS KVPFRSRSPS EV	P	Homo sapiens
276	3867	G Protein-Coupled Receptor GPR7	NM_005285	atggacaacg cctcgttctc ggagccctgg cccgccaacg catcgggccc ggacccggcg ctgagctgct ccaacgcgtc gactctggcg ccgctgccgg cgccgctggc ggtggctgta ccagttgtct acgcggtgat ctgcgccgtg ggtctggcgg gcaactccgc cgtgctgtac gtgttgctgc gggcgccccg catgaagacc gtcaccaacc tgttcatcct caacctggcc atcgccgacg agctcttcac gctggtgctg cccatcaaca tcgccgactt cctgctgcgg cagtggccct tcggggagct catgtgcaag ctcatcgtgg ctatcgacca gtacaacacc	A	Homo sapiens

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277	3867	G Protein-Coupled Receptor GPR7	NP_005276.1	MDNASFSEPW PANASGPDPA LSCSNASTLA PLPAPLAVAV PVVYAVICAV GLAGNSAVLY VLLRAPRMKT VTNLFILNLA IADELFTLVL PINIADFLLR QWPFGELMCK LIVAIDQYNT FSSLYFLTVM SADRYLVVLA TAESRRVAGR TYSAARAVSL AVWGIVTLVV LPFAVFARLD DEQGRRQCVL VFPQPEAFWW RASRLYTLVL GFAIPVSTIC VLYTTLLCRL HAMRLDSHAK ALERAKKRVT FLVVAILAVC LLCWTPYHLS TVVALTTDLP QTPLVIAISY FITSLTYANS CLNPFLYAFL DASFRRNLRQ LITCRAAA	P	Homo sapiens
278	3868	G Protein-Coupled Receptor GPR8	NM_005286	atgcaggccg ctgggcaccc agagcccctt gacagcaggg gctccttctc cctccccacg atgggtgcca acgtctctca ggacaatggc actggccaca atgccacctt ctccgagcca ctgccgttcc tctatgtgct cctgcccgcc gtgtactccg ggatctgtgc tgtggggctg actggcaaca cggccgtcat ccttgtaatc ctaagggcgc ccaagatgaa gacggtgacc aacgtgttca tcctgaacct ggccgtcgcc gacgggctct tcacgctggt actgcccgtc aacatcgcgg agcacctgct gcagtactgg cccttcgggg agctgctctg caagctggtg ctggccgtcg accactacaa catcttctcc agcatctact tcctagccgt gatgagcgtg gaccgatacc tggtggtgct ggccaccgtg aggtcccgcc acatgccctg gcgcacctac cggggggcga aggtcgccag cctgtgtgtc tggctgggcg tcacggtcct ggttctgccc ttcttctctt tcgctggcgt ctacagcaac gagctgcagg tcccaagctg tgggctgagc ttcccgtggc ccgagcgggt ctggttcaag gccagccgtg tctacacttt ggtcctgggc ttcgtgctgc ccgtgtgcac catctgtgtg ctctacacag acctcctgcg caggctgcgg gccgtgcggc tccgctctgg agccaaggct ctaggcaagg ccaggcggaa ggtgaccgtc ctggtcctcg tcgtgctggc cgtgtgcctc ctctgctgga cgcccttcca cctggcctct gtcgtggccc tgaccacgga cctgccccag accccactgg tcatcagtat gtcctacgtc atcaccagcc tcacgtacgc caactcgtgc ctgaacccct tcctctacgc ctttctagat gacaacttcc ggaagaactt ccgcagcata ttgcggtgct ga	A	Homo sapiens
279	3868	G Protein-Coupled Receptor GPR8	NP_005277.1	MQAAGHPEPL DSRGSFSLPT MGANVSQDNG TGHNATFSEP LPFLYVLLPA VYSGICAVGL TGNTAVILVI LRAPKMKTVT NVFILNLAVA DGLFTLVLPV NIAEHLLQYW PFGELLCKLV LAVDHYNIFS SIYFLAVMSV DRYLVVLATV RSRHMPWRTY RGAKVASLCV WLGVTVLVLP FFSFAGVYSN ELQVPSCGLS FPWPERVWFK ASRVYTLVLG FVLPVCTICV LYTDLLRRLR AVRLRSGAKA LGKARRKVTV LVLVVLAVCL LCWTPFHLAS VVALTTDLPQ TPLVISMSYV ITSLTYANSC LNPFLYAFLD DNFRKNFRSI LRC	P	Homo sapiens

280	3869	G Protein-Coupled Receptor HM74	NM_006018	cgccactttg ctggagcatt cactaggcga ggcgctccat cggactcact agccgcactc atgaatcggc accatctgca ggatcacttt ctggaaatag acaagaagaa ctgctgtgtg ttccgagatg acttcattgc caaggtgttg ccgccggtgt tggggctgga gtttatcttt gggcttctgg gcaatggcct tgccctgtgg attttctgtt tccacctcaa gtcctggaaa tccagccgga ttttcctgtt caacctggca gtagctgact ttctactgat catctgcctg ccgttcgtga tggactacta tgtgcggcgt tcagactgga actttgggga catcccttgc cggctggtgc tcttcatgtt tgccatgaac cgccagggca gcatcatctt cctcacggtg gtggcggtag acaggtattt ccgggtggtc catccccacc acgccctgaa caagatctcc aattggacag cagccatcat ctcttgcctt ctgtggggca tcactgttgg cctaacagtc cacctcctga agaagaagtt gctgatccag aatggccctg caaatgtgtg catcagcttc agcatctgcc ataccttccg gtggcacgaa gctatgttcc tcctggagtt cctcctgccc ctgggcatca tcctgttctg ctcagccaga attatctgga gcctgcggca gagacaaatg gaccggcatg ccaagatcaa gagagccatc accttcatca tggtggtggc catcgtcttt gtcatctgct tccttcccag cgtggttgtg cggatccgca tcttctggct cctgcacact tcgggcacgc agaattgtga agtgtaccgc tcggtggacc tggcgttctt tatcactctc agcttcacct acatgaacag catgctggac cccgtggtgt actacttctc cagcccatcc tttcccaact tcttctccac tttgatcaac cgctgcctcc agaggaagat gacaggtgag ccagataata accgcagcac gagcgtcgag ctcacagggg accccaacaa aaccagaggc gctccagagg cgttaatggc caactccggt gagccatgga gcccctctta tctgggccca acctcaaata accattccaa gaagggacat tgtcaccaag aaccagcatc tctggagaaa cagttgggct gttgcatcga gtaatgtcac tggactcggc ctaaggtttc ctggaacttc cagattcaga gaatctgatt tagggaaact gtggcagatg agtgggagac tggttgcaag gtgtgaccac aggaatcctg gaggaacaga gagtaaagct tctaggcatc tgaaacttgc ttcatctctg acgctcgcag gactgaagat gggcaaattg taggcgtttc tgctgagcag agttggagcc agagatctac ttgtgacttg ttggccttct tcccacatct gcctcagact ggggggggct cagctcctcg ggtgatatct agcctgcttg tgagctctag cagggataag gagagctgag attggaggga attgtgttgc tcctggagga agcccaggca tcattaaaca agccagtagg tcacctggct tccgtggacc aattcatctt tcagacaagc tttagagaaa tggactcagg gaagagactc acatgctttg gttagtatct gtgtttccgg tgggtgtaat aggggattag ccccagaagg gactgagcta aacagtgtta ttatgggaaa ggaaatggca ttgctgcttt caaccagcga ctaatgcaat ccattcctct cttgtttata gtaatctaag ggttgagcag ttaaaacggc ttcaggatag aaagctgttt cccacctgtt tcgttttacc attaaaaggg aaacgtgcct ctgccccacg ggtagagggg gtgcacgttc ctcctggttc cttcgcttgt gtttctgtac ttaccaaaaa tctaccactt caataaattt tgataggaga caaaaaaaaa a	A	Homo sapiens
281	3869	G Protein-Coupled Receptor HM74	NP_006009.1	MNRHHLQDHF LEIDKKNCCV FRDDFIAKVL PPVLGLEFIF GLLGNGLALW IFCFHLKSWK SSRIFLFNLA VADFLLIICL PFVMDYYVRR SDWNFGDIPC RLVLFMFAMN RQGSIIFLTV VAVDRYFRVV HPHHALNKIS NWTAAIISCL LWGITVGLTV HLLKKKLLIQ NGPANVCISF SICHTFRWHE AMFLLEFLLP LGIILFCSAR IIWSLRQRQM DRHAKIKRAI TFIMVVAIVF VICFLPSVVV RIRIFWLLHT SGTQNCEVYR SVDLAFFITL SFTYMNSMLD PVVYYFSSPS FPNFFSTLIN RCLQRKMTGE PDNNRSTSVE LTGDPNKTRG APEALMANSG EPWSPSYLGP	P	Homo sapiens

				TSNNHSKKGH CHQEPASLEK QLGCCIE		
282	3870	G Protein-Coupled Receptor OGR1	NM_003485	atggggaaca tcactgcaga caactcctcg atgagctgta ccatcgacca taccatccac cagacgctgg ccccggtggt ctatgttacc gtgctggtgg tgggcttccc ggccaactgc ctgtccctct acttcggcta cctgcagatc aaggcccgga acgagctggg cgtgtacctg tgcaacctga cggtggccga cctcttctac atctgctcgc tgcccttctg gctgcagtac gtgctgcagc acgacaactg gtctcacggc gacctgtcct gccaggtgtg cggcatcctc ctgtacgaga acatctacat cagcgtgggc ttcctctgct gcatctccgt ggaccgctac ctggctgtgg cccatccctt ccgcttccac cagttccgga ccctgaaggc ggccgtcggc gtcagcgtgg tcatctgggc caaggagctg ctgaccagca tctacttcct gatgcacgag gaggtcatcg aggacgagaa ccagcaccgc gtgtgctttg agcactaccc catccaggca tggcagcgcg ccatcaacta ctaccgcttc ctggtgggct tcctcttccc catctgcctg ctgctggcgt cctaccaggg catcctgcgc gccgtgcgcc ggagccacgg cacccagaag agccgcaagg accagatcca gcggctggtg ctcagcaccg tggtcatctt cctggcctgc ttcctgccct accacgtgtt gctgctggtg cgcagcgtct gggaggccag ctgcgacttc gccaagggcg ttttcaacgc ctaccacttc tccctcctgc tcaccagctt caactgcgtc gccgaccccg tgctctactg cttcgtcagc gagaccaccc accgggacct ggcccgcctc cgcggggcct gcctggcctt cctcacctgc tccaggaccg gccgggccag ggaggcctac ccgctgggtg cccccgaggc ctccgggaaa agcggggccc agggtgagga gcccgagctg ttgaccaagc tccacccggc cttccagacc cctaactcgc cagggtcggg cgggttcccc acgggcaggt tggcctag	A	Homo sapiens
283	3870	G Protein-Coupled Receptor OGR1	NP_003476.1	MGNITADNSS MSCTIDHTIH QTLAPVVYVT VLVVGFPANC LSLYFGYLQI KARNELGVYL CNLTVADLFY ICSLPFWLQY VLQHDNWSHG DLSCQVCGIL LYENIYISVG FLCCISVDRY LAVAHPFRFH QFRTLKAAVG VSVVIWAKEL LTSIYFLMHE EVIEDENQHR VCFEHYPIQA WQRAINYYRF LVGFLFPICL LLASYQGILR AVRRSHGTQK SRKDQIQRLV LSTVVIFLAC FLPYHVLLLV RSVWEASCDF AKGVFNAYHF SLLLTSFNCV ADPVLYCFVS ETTHRDLARL RGACLAFLTC SRTGRAREAY PLGAPEASGK SGAQGEEPEL LTKLHPAFQT PNSPGSGGFP TGRLA	P	Homo sapiens
284	3921	Prostacyclin Receptor	NM_000960	agcaagtgaa ggcacagacg cacggacag gagagcctgg gcaagactgg agagcccaga cctgggatgg cggattcgtg caggaacctc acctacgtgc ggggctcggt ggggccggcc accagcaccc tgatgttcgt ggccggtgtg gtgggcaacg ggctggccct gggcatcctg agcgcacggc gaccggcgcg cccctcggcc ttcgcggtgc tggtcaccgg actggcggcc accgacctgc tgggcaccag cttcctgagc ccggccgtgt tcgtggccta tgcgcgcaac agctccctgc tgggcctggc ccgaggcggc cccgccctgt gcgatgcctt cgccttcgcc atgaccttct tcggcctggc gtccatgctc atcctctttg ccatggccgt ggagcgctgc ctggcgctga gccaccccta cctctacgcg cagctggacg ggccccgctg cgcccgcctg gcgctgccag ccatctacgc cttctgcgtc ctcttctgcg cgctgcccct gctgggcctg ggccaacacc agcagtactg ccccggcagc tggtgcttcc tccgcatgcg ctgggcccag ccgggcggcg ccgccttctc gctggcctac gccggcctgg tggccctgct ggtggctgcc atcttcctct gcaacggctc ggtcaccctc agcctctgcc gcatgtaccg ccagcagaag cgccaccagg gctctctggg tccacggccg cgcaccggag aggacgaggt ggaccacctg	A	Homo sapiens

				atcctgctgg ccctcatgac agtggtcatg gccgtgtgct ccctgcctct cacgatccgc tgcttcaccc aggctgtcgc ccctgacagc agcagtgaga tggggacct ccttgccttc cgcttctacg ccttcaaccc catcctggac ccctgggtct tcatcctttt ccgcaaggct gtcttccagc gactcaagct ctgggtctgc tgcctgtgcc tcgggcctgc ccacggagac tcgcagacac ccctttccca gctcgcctcc gggaggaggg acccaagggc cccctctgct cctgtgggaa aggaggggag ctgcgtgcct ttgtcggctt ggggcgaggg gcaggtggag cccttgcctc ccacacagca gtccagcggc agcgccgtgg gaacgtcgtc caaagcagaa gccagcgtcg cctgctccct ctgctgacat ttcaagctga ccctgtgatc tctgccctgt cttcgggcga caggagccag aaaatcaggg acatggctga tggctgcgga tgctggaacc ttggcccccca aactctgggg ccgatcagct gctgtttctc ctgcggcagg gcagtcgctg ctggctctgg gaagagagtg agggacagag gaaacgttta tcctggagtg cagaaagaat ggttctctca aaataaccag tggcctggcc gacctgctct ggccctggat tccccatcca tctcattgtc taaatattta gaaggcggag aagttcccag aggcttctgt acagtcaggt ctgctctggt ctgggtgctg gctccaatct gcgtccactt aggaggccca actgcccacc ccaagtcccc aggggatggc cctccccctc taccaagcca ctccaagagc cagccccctt tctgctccac aaaaaccaca gttattggaa aagctccctg ccttcccttg ccgctggtcc cccaccaggc ttgggagccc tggcatccca aaggggcaac gggaggaagg ggaggctgct gcattgtggg tgatgacgta ggacatgtgc ttggtacaaa aagggcctga gacattccac ct		
285	3921	Prostacyclin Receptor	NP_000951.1	MADSCRNLTY VRGSVGPATS TLMFVAGVVG NGLALGILSA RRPARPSAFA VLVTGLAATD LLGTSFLSPA VFVAYARNSS LLGLARGGPA LCDAFAFAMT FFGLASMLIL FAMAVERCLA LSHPYLYAQL DGPRCARLAL PAIYAFCVLF CALPLLGLGQ HQQYCPGSWC FLRMRWAQPG GAAFSLAYAG LVALLVAAIF LCNGSVTLSL CRMYRQQKRH QGSLGPRPRT GEDEVDHLIL LALMTVVMAV CSLPLTIRCF TQAVAPDSSS EMGDLLAFRF YAFNPILDPW VFILFRKAVF QRLKLWVCCL CLGPAHGDSQ TPLSQLASGR RDPRAPSAPV GKEGSCVPLS AWGEGQVEPL PPTQQSSGSA VGTSSKAEAS VACSLC	P	Homo sapiens
286	3923	Prostaglandin D2 Receptor	U31099	gctgtgcaac ctcggcgcca tgcgcaacct ctatgcgatg caccggcggc tgcagcggca cccgcgctcc tgcaccaggg actgtgccga gccgcgcgcg gacgggaggg aagcgtcccc tcagcccctg gaggagctgg atcacctcct gctgctggcg ctgatgaccg tgctcttcac tatgtgttct ctgcccgtaa tttatcgcgc ttactatgga gcatttaagg atgtcaagga gaaaaacagg acctctgaag aagcagaaga cctccgagcc ttgcgatttc tatctgtgat ttcaattgtg gacccttgga tttttatcat tttcagatct ccagtatttc ggatattttt tcacaagatt ttcattagac ctcttaggta caggagccgg tgcagcaatt ccactaacat ggaatccagt ctgtgacagt gtttttcact ctgtggtaag ctgaggaata tgtcacattt tcagtcaaag aacca	A	Homo sapiens
287	3923	Prostaglandin D2 Receptor	Q13258	MKSPFYRCQN TTSVEKGNSA VMGGVLFSTG LLGNLLALGL LARSGLGWCS RRPLRPLPSV FYMLVCGLTV TDLLGKCLLS PVVLAAYAQN RSLRVLAPAL DNSLCQAFAF FMSFFGLSST LQLLAMALEC WLSLGHPFFY RRHITLRLGA LVAPVVSAFS LAFCALPFMG FGKFVQYCPG TWCFIQMVHE EGSLSVLGYS VLYSSLMALL VLATVLCNLG AMRNLYAMHR RLQRHPRSCT RDCAEPRADG REASPQPLEE LDHLLLLALM TVLFTMCSLP VIYRAYYGAF KDVKEKNRTS EEAEDLRALR FLSVISIVDP WIFIIFRSPV FRIFFHKIFI RPLRYRSRCS NSTNMESSL	P	Homo sapiens

288	3924	Prostaglandin E Receptor EP1	NM_000955	gggggcggca gggctgagcg gccggtgatg gggaccccac atcccaggca gtgccggcac ccctggcgcc tgacatgagc ccttgcgggc ccctcaacct gagcctggcg ggcgaggcga ccacatgcgc ggcgccctgg gtccccaaca cgtcggccgt gccgccgtcg ggcgcttcgc ccgcgctgcc catcttctcc atgacgctgg gcgccgtgtc caacctgctg gcgctggcgc tgctggcgca ggccgcgggc cgcctgcgac gccgccgctc ggccaccacc ttcctgctgt tcgtggccag cctgctggcc accgacctgg cgggccacgt gatcccgggc gcgctggtgc tgcgtctgta cactgcgggg cgcgctccgg ccggcggggc ctgccacttc ctgggcggct gcatggtctt cttcggcctg tgcccgctgc tgctgggctg tggcatggcc gtggagcgct gcgtgggcgt cacgcggccg ctgctccacg ccgcgcgggt ctcggtcgcc cgcgcgcgcc tggcgctggc cgcggtggcc gcggtggcct tggccgtggc gctgctgccg ctggcgcgcg tgggccgcta tgagctgcag tacccgggca cgtggtgctt catcggcctg ggtcccccgg gcggctggcg ccaggcactg cttgctggcc tcttcgccag cctcggcctg gtcgcgctcc tcgccgcgct ggtgtgcaac acgctcagcg gcctggccct gcatcgcgcc cgctggcgac gccgctcccg acggcctccc ccggcctcag gccccgacag ccggcgtcgc tggggggcgc acggaccccg ctcggcctcc gcctcgtccg cctcgtccat cgcttcggcc tccaccttct ttggcggctc tcggagcagc ggctcggcac gcagagctcg cgcccacgac gtggagatgg tgggccagct tgtcggtatc atggtggtgt cgtgcatctg ctggagccca atgctggtgt tggtggcgct ggccgtcggc ggctggagct ctacctccct gcagcggcca ctgttcctgg ccgtgcgcct tgcctcctgg aaccagatcc tggacccttg ggtgtacatc ctactgcgcc aggccgtgct gcgccaactg cttcgcctct tgcccccgag ggccggagcc aagggcggcc ccgcggggct gggcctaaca ccgagcgcct gggaggccag ctcgctgcgc agctcccggc acagcggcct cagccacttc taagcacaac cagaggccca acgactaagc cagcccaccc tgggctgggc ccaggtgcgc ggcgcagagc ctttgggaat aaaaagccat tctgcg	A	Homo sapiens
289	3924	Prostaglandin E Receptor EP1	NP_000946.1	MSPCGPLNLS LAGEATTCAA PWVPNTSAVP PSGASPALPI FSMTLGAVSN LLALALLAQA AGRLRRRRSA TTFLLFVASL LATDLAGHVI PGALVLRLYT AGRAPAGGAC HFLGGCMVFF GLCPLLLGCG MAVERCVGVT RPLLHAARVS VARARLALAA VAAVALAVAL LPLARVGRYE LQYPGTWCFI GLGPPGGWRQ ALLAGLFASL GLVALLAALV CNTLSGLALH RARWRRRSRR PPPASGPDSR RRWGAHGPRS ASASSASSIA SASTFFGGSR SSGSARRARA HDVEMVGQLV GIMVVSCICW SPMLVLVALA VGGWSSTSLQ RPLFLAVRLA SWNQILDPWV YILLRQAVLR QLLRLLPPRA GAKGGPAGLG LTPSAWEASS LRSSRHSGLS HF	P	Homo sapiens
290	3925	Prostaglandin E Receptor EP2	NM_000956	gggccgccgt cggcgcgctg ggtgcgggaa gggggctctg gatttcggtc cctccccttt ttcctctgag tctcggaacg ctccagctct cagaccctct tcctcccagg taaaggccgg gagaggaggg cgcatctctt ttccaggcac cccaccatgg gcaatgcctc caatgactcc cagtctgagg actgcgagac gcgacagtgg cttcccccag gcgaaagccc agccatcagc tccgtcatgt tctcggccgg ggtgctgggg aacctcatag cactggcgct gctggcgcgc cgctggcggg gggacgtggg gtgcagcgcc ggccgcagga gctccctctc cttgttccac gtgctggtga ccgagctggt gttcaccgac ctgctcggga cctgcctcat cagcccagtg gtactggctt cgtacgcgcg gaaccagacc ctggtggcac tggcgcccga gagccgcgcg tgcacctact tcgctttcgc catgaccttc ttcagcctgg ccacgatgct catgctcttc gccatggccc tggagcgcta cctctcgatc gggcacccct acttctacca gcgccgcgtc tcggcctccg gggcctggc cgtgctgcct gtcatctatg cagtctccct gctcttctgc	A	Homo sapiens

				tcgctgccgc tgctggacta tgggcagtac gtccagtact gccccgggac ctggtgcttc atccggcacg ggcggaccgc ttacctgcag ctgtacgcca ccctgctgct gcttctcatt gtctcggtgc tcgcctgcaa cttcagtgtc attctcaacc tcatccgcat gcaccgccga agccggagaa gccgctgcgg accttccctg ggcagtggcc ggggcggccc cggggcccgc aggagagggg aaagggtgtc catggcggag gagacggacc acctcattct cctggctatc atgaccatca ccttcgccgt ctgctccttg cctttcacga tttttgcata tatgaatgaa acctcttccc gaaaggaaaa atgggacctc caagctctta ggtttttatc aattaattca ataattgacc cttgggtctt tgccatcctt aggcctcctg ttctgagact aatgcgttca gtcctctgtt gtcggatttc attaagaaca caagatgcaa cacaaacttc ctgttctaca cagtcagatg ccagtaaaca ggctgacctt tgaggtcagt agtttaaaag ttcttagtta tatagcatct ggaagatcat tttgaaattg ttccctggag aaatgaaaac agtgtgtaaa caaaatgaag ctgccctaat aaaaaggagt atacaaacat ttaagctgtg gtcaaggcta cagatgtgct gacaaggcac ttcatgtaaa gtgtcagaag gagctacaaa acctaccctc aatgagcatg gtacttggcc tttggaggaa caatcggctg cattgaagat ccagctgcct attgatttaa gctttcctgt tgaatgacaa agtatgtggt tttgtaattt gtttgaaacc ccaaacagtg actgtacttt ctattttaat cttgctacta ccgttataca catatagtgt acagccagac cagattaaac ttcatatgta atctctagga agtcaatatg tggaagcaac caagcctgct gtcttgtgat cacttagcga accctttatt tgaacaatga agttgaaaat cataggcacc ttttactgtg atgtttgtgt atgtgggagt actctcatca ctacagtatt actcttacaa gagtggactc agtgggttaa catcagtttt gtttactcat cctccaggaa ctgcaggtca agttgtcagg ttatttattt tataatgtcc atatgctaat agtgatcaag aagactttag gaatggttct ctcaacaaga aataatagaa atgtctcaag gcagttaatt ctcattaata ctcttattat cctatttctg gggaggatg tacgtggcca tgtatgaagc caaatattag gcttaaaaac tgaaaaatct ggttcattct tcagatatac tggaaccctt ttaaagttga tattggggcc atgagtaaaa tagattttat aagatgactg tgttgtacca aaattcatct gtctatattt tatttagggg aacatggttt gactcatctt atatgggaaa ccatgtagca gtgagtcata tcttaatata tttctaaatg tttggcatgt aaatgtaaac tcagcatcaa aatatttcag tgaatttgca ctgtttaatc atagttactg tgtaaactca tctgaaatgt tacaaaaata aactataaaa ca		
291	3925	Prostaglandi n E Receptor EP2	NP_000947.1	MGNASNDSQS EDCETRQWLP PGESPAISSV MFSAGVLGNL IALALLARRW RGDVGCSAGR RSSLSLFHVL VTELVFTDLL GTCLISPVVL ASYARNQTLV ALAPESRACT YFAFAMTFFS LATMLMLFAM ALERYLSIGH PYFYQRRVSA SGGLAVLPVI YAVSLLFCSL PLLDYGQYVQ YCPGTWCFIR HGRTAYLQLY ATLLLLLIVS VLACNFSVIL NLIRMHRRSR RSRCGPSLGS GRGGPGARRR GERVSMAEET DHLILLAIMT ITFAVCSLPF TIFAYMNETS SRKEKWDLQA LRFLSINSII DPWVFAILRP PVLRLMRSVL CCRISLRTQD ATQTSCSTQS DASKQADL	P	Homo sapiens
292	3926	Prostaglandi n E2 Receptor EP3	L32662	atgagaaaaa gaagactcag agagcaagag gaattttggg gaaattaa	A	Homo sapiens
293	3926	Prostaglandi n E2 Receptor EP3	NM_000957	accagaggtt tcccagagag gaaggcgtgg ctccctcccg ggccagtgag ccctggcgcc gccgcggccg cggtcccagc agcggagtag ggcggcggct gcgccccgca ccatgggggg cagcccagcc ccagccgcgg taaacgccga cctccgccgc cgcccgcgcc gcgtctgccc	A	Homo sapiens

				cctcccgctg cggctctctg gacgccatcc cctcctcacc tcgaagccaa catgaaggag acccggggct acggagggga tgccccttc tgcacccgcc tcaaccactc ctacacaggc atgtgggcgc ccgagcgttc cgccgaggcg cggggcaacc tcacgcgccc tccagggtct ggcgaggatt gcggatcggt gtccgtggcc ttcccgatca ccatgctgct cactggtttc gtgggcaacg cactggccat gctgctcgtg tcgcgcagct accggcgccg ggagagcaag cgcaagaagt ccttcctgct gtgcatcggc tggctggcgc tcaccgacct ggtcgggcag cttctcacca ccccggtcgt catcgtcgtg tacctgtcca agcagcgttg ggagcacatc gacccgtcgg ggcggctctg cacctttttc gggctgacca tgactgtttt cggctctcc tcgttgttca tcgccagcgc catggccgtc gagcgggcgc tggccatcag ggcgccgcac tggtatgcga gccacatgaa gacgcgtgcc acccgcgctg tgctgctcgg cgtgtggctg gccgtgctcg ccttcgccct gctgccggtg ctgggcgtgg gccagtacac cgtccagtgg cccgggacgt ggtgcttcat cagcaccggg cgaggggca acgggactag ctcttcgcat aactggggca accttttctt cgcctctgcc tttgccttcc tggggctctt ggcgctgaca gtcacctttt cctgcaacct ggccaccatt aaggccctgg tgtcccgctg ccgggccaag gccacggcat ctcagtccag tgcccagtgg ggccgcatca cgaccgagac ggccattcag cttatgggga tcatgtgcgt gctgtcggtc tgctggtctc cgctcctgat aatgatgttg aaaatgatct tcaatcagac atcagttgag cactgcaaga cacacacgga gaagcagaaa gaatgcaact tcttcttaat agctgttcgc ctggcttcac tgaaccagat cttggatcct tgggtttacc tgctgttaag aaagatcctt cttcgaaagt tttgccagat gagaaaaaga agactcagag agcaagagat ggggcctgat ggaaggtgtt tttgtcatgc atggaggcag gtccccagga cttggtgcag ttctcatgat agagaaccct gcagtgtcca gctaagctga tgacttgaag ataaatctgc ctaaccctgg gatgaagtat ctgtgaacta ttttgacagc agatgaggaa ttttggggaa attaaaacct gcctttctgc caggatcaca tcactggaag ctccatgact ctctttttgt aaaagaaaaa aaaatcacag aaacacccac ctcccaaact attctctttt acttcttccc ccaagcccac ccccaaatat aactgttatc cagaagctgt tatgtcctgt ttccatacat gtttttgtac ttttactata tctacataca tcaattaaac ttatgtccta ttgttttgtg aatttatatt tgcgtataca ttatcatatg taaaatttgc atttttttat tgaaaattat gtttcttgag atttatccac attgaaacat ggagctctaa atcgttaatt ttaaccgcta tagagtattc cataatttga ataaagcata atttgtttgt ac		
294	3926	Prostaglandin E2 Receptor EP3	NP_000948.1	MKETRGYGGD APFCTRLNHS YTGMWAPERS AEARGNLTRP PGSGEDCGSV SVAFPITMLL TGFVGNALAM LLVSRSYRRR ESKRKKSFLL CIGWLALTDL VGQLLTTPVV IVVYLSKQRW EHIDPSGRLC TFFGLTMTVF GLSSLFIASA MAVERALAIR APHWYASHMK TRATRAVLLG VWLAVLAFAL LPVLGVGQYT VQWPGTWCFI STGRGGNGTS SSHNWGNLFF ASAFAFLGLL ALTVTFSCNL ATIKALVSRC RAKATASQSS AQWGRITTET AIQLMGIMCV LSVCWSPLLI MMLKMIFNQT SVEHCKTHTE KQKECNFFLI AVRLASLNQI LDPWVYLLLR KILLRKFCQM RKRRLREQEM GPDGRCFCHA WRQVPRTWCS SHDREPCSVQ LS	P	Homo sapiens
295	3927	Prostaglandin E Receptor EP4	NM_000958	cggcacagcc tcacacctga acgctgtcct cccgcagacg agaccggcgg gcactgcaaa gctgggactc gtctttgaag gaaaaaaaat agcgagtaag aaatccagca ccattcttca ctgacccatc ccgctgcacc tcttgtttcc caagtttttg aaagctggca actctgacct cggtgtccaa aaatcgacag ccactgagac cggctttgag aagccgaaga tttggcagtt	A	Homo sapiens

				tccagactga gcaggacaag gtgaaagcag gttggaggcg ggtccaggac atctgagggc tgaccctggg ggctcgtgag gctgccaccg ctgctgccgc tacagaccca gccttgcact ccaaggctgc gcaccgccag ccactatcat gtccactccc ggggtcaatt cgtccgcctc cttgagcccc gaccggctga acagcccagt gaccatcccg gcggtgatgt tcatcttcgg ggtggtgggc aacctggtgg ccatcgtggt gctgtgcaag tcgcgcaagg agcagaagga gacgaccttc tacacgctgg tatgtgggct ggctgtcacc gacctgttgg gcactttgtt ggtgagcccg gtgaccatcg ccacgtacat gaagggccaa tggcccgggg gccagccgct gtgcgagtac agcaccttca ttctgctctt cttcagcctg tccggcctca gcatcatctg cgccatgagt gtcgagcgct acctggccat caaccatgcc tatttctaca gccactacgt ggacaagcga ttggcgggcc tcacgctctt tgcagtctat gcgtccaacg tgctcttttg cgcgctgccc aacatgggtc tcggtagctc gcggctgcag tacccagaca cctggtgctt catcgactgg accaccaacg tgacggcgca cgccgcctac tcctacatgt acgcgggctt cagctccttc ctcattctcg ccaccgtcct ctgcaacgtg cttgtgtgcg gcgcgctgct ccgcatgcac cgccagttca tgcgccgcac ctcgctgggc accgagcagc accacgcggc cgcggccgcc tcggttgcct cccggggcca ccccgctgcc tccccagcct tgccgcgcct cagcgacttt cggcgccgcc ggagcttccg ccgcatcgcg ggcgccgaga tccagatggt catcttactc attgccacct ccctggtggt gctcatctgc tccatcccgc tcgtggtgcg agtattcgtc aaccagttat atcagccaag tttggagcga gaagtcagta aaaatccaga tttgcaggcc atccgaattg cttctgtgaa ccccatccta gacccctgga tatatatcct cctgagaaag acagtgctca gtaaagcaat agagaagatc aaatgcctct tctgccgcat tggcgggtcc cgcagggagc gctccggaca gcactgctca gacagtcaaa ggacatcttc tgccatgtca ggccactctc gctccttcat ctcccgggag ctgaaggaga tcagcagtac atctcagacc ctcctgccag acctctcact gccagacctc agtgaaaatg gccttggagg caggaatttg cttccaggtg tgcctggcat gggcctggcc caggaagaca ccacctcact gaggactttg cgaatatcag agacctcaga ctcttcacag ggtcaggact cagagagtgt cttactggtg gatgaggctg gtgggagcgg caggggctggg cctgcccccta aggggagctc cctgcaagtc acatttccca gtgaaacact gaacttatca gaaaaatgta tataataggc aaggaaagaa atacagtact gtttctggac ccttataaaa tcctgtgcaa tagacacata catgtcacat ttagctgtgc tcagaagggc tatcatca		
296	3927	Prostaglandi n E Receptor EP4	NP_000949.1	MSTPGVNSSA SLSPDRLNSP VTIPAVMFIF GVVGNLVAIV VLCKSRKEQK ETTFYTLVCG LAVTDLLGTL LVSPVTIATY MKGQWPGGQP LCEYSTFILL FFSLSGLSII CAMSVERYLA INHAYFYSHY VDKRLAGLTL FAVYASNVLF CALPNMGLGS SRLQYPDTWC FIDWTTNVTA HAAYSYMYAG FSSFLILATV LCNVLVCGAL LRMHRQFMRR TSLGTEQHHA AAAASVASRG HPAASPALPR LSDFRRRRSF RRIAGAEIQM VILLIATSLV VLICSIPLVV RVFVNQLYQP SLEREVSKNP DLQAIRIASV NPILDPWIYI LLRKTVLSKA IEKIKCLFCR IGGSRRERSG QHCSDSQRTS SAMSGHSRSF ISRELKEISS TSQTLLPDLS LPDLSENGLG GRNLLPGVPG MGLAQEDTTS LRTLRISETS DSSQGQDSES VLLVDEAGGS GRAGPAPKGS SLQVTFPSET LNLSEKCI	P	Homo sapiens
297	3928	Prostaglandi n F2-alpha Receptor	NM_000959	ggcgcggggc gccatggcac accgagcggc tccgtcttct gctcctcaga gagcccggct ggcggcctgg gatgacaaga tgtctggact gcaatcctgc acagttttga gagggagatg acttgagtgg ttggctttta tctccacaac aatgtccatg aacaattcca aacagctagt	A	Homo sapiens

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298	3928	Prostaglandin F2-alpha Receptor	NP_000950.1	MSMNNSKQLV SPAAALLSNT TCQTENRLSV FFSVIFMTVG ILSNSLAIAI LMKAYQRFRQ KSKASFLLLA SGLVITDFFG HLINGAIAVF VYASDKEWIR FDQSNVLCSI FGICMVFSGL CPLLLGSVMA IERCIGVTKP IFHSTKITSK HVKMMLSGVC LFAVFIALLP ILGHRDYKIQ ASRTWCFYNT EDIKDWEDRF YLLLFSFLGL LALGVSLLCN AITGITLLRV KFKSQQHRQG RSHHLEMVIQ LLAIMCVSCI CWSPFLVTMA NIGINGNHSL ETCETTLFAL RMATWNQILD PWVYILLRKA VLKNLYKLAS QCCGVHVISL HIWELSSIKN SLKVAAISES PVAEKSAST	P	Homo sapiens
299	4051	Proteinase-Activated Receptor 2	NM_005242	cggcccgccc tggggaggcg cgcagcagag gctccgattc ggggcaggtg agaggctgac tttctctcgg tgcgtccagt ggagctctga gtttcgaatc ggtggcggcg gattccccgc gcgcccggcg tcggggcttc caggaggatg cggagcccca gcgcggcgtg gctgctgggg gccgccatcc tgctagcagc ctctctctcc tgcagtggca ccatccaagg aaccaataga tcctctaaag gaagaagcct tattggtaag gttgatggca catcccacgt cactggaaaa ggagttacag ttgaaacagt cttttctgtg gatgagtttt ctgcatctgt cctcactgga aaactgacca cggtcttcct tccaattgtc tacacaattg tgtttgtggt gggtttgcca agtaacggca tggccctgtg ggtctttctt ttccgaacta agaagaagca ccctgctgtg atttacatgg ccaatctggc cttggctgac ctcctctctg tcatctggtt ccccttgaag attgcctatc acatacatgc caacaactgg atttatgggg aagctctttg taatgtgctt attggctttt tctatggcaa catgtactgt tccattctct tcatgacctg cctcagtgtg cagaggtatt gggtcatcgt gaaccccatg gggcactcca ggaagaaggc aaacattgcc attggcatct ccctggcaat atggctgctg attctgctgg tcaccatccc tttgtatgtc gtgaagcaga ccatcttcat tcctgccctg aacatcacga cctgtcatga tgttttgcct gagcagctct tggtgggaga catgttcaat tacttcctct ctctggccat tggggtcttt ctgttcccag ccttcctcac agcctctgcc tatgtgctga tgatcagaat gctgcgatct tctgccatgg atgaaaactc agagaagaaa aggaagaggg ccatcaaact cattgtcact gtcctggcca tgtacctgat ctgcttcact cctagtaacc ttctgcttgt ggtgcattat tttctgatta agagccaggg ccagagccat gtctatgccc tgtacattgt agccctctgc ctctctaccc ttaacagctg catcgacccc tttgtctatt actttgtttc acatgatttc agggatcatg caaagaacgc tctcctttgc cgaagtgtcc gcactgtaaa gcagatgcaa gtatccctca cctcaaagaa acactccagg aaatccagct cttactcttc aagttcaacc actgttaaga cctcctattg agttttccag gtcctcagat gggaattgca cagtaggatg tggaacctgt ttaatgttat gaggacgtgt ctgttatttc ctaatcaaaa aggtctcacc acataccacc g	A	Homo sapiens
300	4051	Proteinase-Activated	NP_005233.2	MRSPSAAWLL GAAILLAASL SCSGTIQGTN RSSKGRSLIG KVDGTSHVTG KGVTVETVFS VDEFSASVLT GKLTTVFLPI VYTIVFVVGL PSNGMALWVF LFRTKKKHPA VIYMANLALA	P	Homo sapiens

		Receptor 2		DLLSVIWFPL KIAYHIHANN WIYGEALCNV LIGFFYGNMY CSILFMTCLS VQRYWVIVNP MGHSRKKANI AIGISLAIWL LILLVTIPLY VVKQTIFIPA LNITTCHDVL PEQLLVGDMF NYFLSLAIGV FLFPAFLTAS AYVLMIRMLR SSAMDENSEK KRKRAIKLIV TVLAMYLICF TPSNLLLVVH YFLIKSQGQS HVYALYIVAL CLSTLNSCID PFVYYFVSHD FRDHAKNALL CRSVRTVKQM QVSLTSKKHS RKSSSYSSSS TTVKTSY		
301	4052	Proteinase-Activated Receptor 3	NM_004101	cctgcctgca cggcacagga gagcaaactt ctacagacag accaaggctt ccatttgctg ctgacacatg gaactgaggt gaaattgtgc tccatgattt tacagatttc ataacgttta agagacggga ctcaggtcat caaaatgaaa gccctcatct ttgcagctgc tggcctcctg cttctgttgc ccactttttg tcagagtggc atggaaaatg atacaaacaa cttggcaaag ccaaccttac ccattaagac ctttcgtgga gctcccccaa attcttttga agagttcccc ttttctgcct tggaaggctg gacaggagcc acgattactg taaaaattaa gtgccctgaa gaaagtgctt cacatctcca tgtgaaaaat gctaccatgg ggtacctgac cagctcctta agtactaaac tgatacctgc catctacctc ctggtgtttg tagttggtgt cccggccaat gctgtgaccc tgtggatgct tttcttcagg accagatcca tctgtaccac tgtattctac accaacctgg ccattgcaga ttttcttttt tgtgttacat tgccctttaa gatagcttat catctcaatg ggaacaactg ggtatttgga gaggtcctgt gccgggccac cacagtcatc ttctatggca acatgtactg ctccattctg ctccttgcct gcatcagcat caaccgctac ctggccatcg tccatccttt cacctaccgg ggcctgccca agcacaccta tgccttggta acatgtggac tggtgtgggc aacagttttc ttatatatgc tgccattttt catactgaag caggaatatt atcttgttca gccagacatc accacctgcc atgatgttca caacacttgc gagtcctcat ctcccttcca actctattac ttcatctcct tggcattctt tggattctta attccatttg tgcttatcat ctactgctat gcagccatca tccggacact taatgcatac gatcatagat ggttgtggta tgttaaggcg agtctcctca tccttgtgat tttaccatt tgctttgctc caagcaatat tattcttatt attcaccatg ctaactacta ctacaacaac actgatggct tatattttat atatctcata gctttgtgcc tgggtagtct taatagttgc ttagatccat tcctttattt tctcatgtca aaaaccagaa atcactccac tgcttacctt acaaaatagt gaaatgatct tagagaacaa ggacagccat cacagagaac gtctgttttc aagaacaaca taagcatagt gcaaggagct ccatttccga gctcctaaga aatatgcttc aaaggtcaaa cattacaaaa gcattagtag tttgtttgtt tgtttttgag actgagtctc actttatcac ccagactggc gtgcagtggc actatcttgg ctcattgcaa cctctgcctc ccaggtcagc ctcccaagta gctgggatta caccaccatg cccagctact aaaaatactt gtatttttag tagagacggg gtttcaccat gttgaccagg ctggtcttga actcctgacc tcaagtgatc ttccggcctc agcctcccaa agtgctggat tacaggcgtg agccactgag ccagccagca ttagtaattt ttaaaaacac tttatcagta ttttaaaaat gttaatgcag gagaaaagat atcacaactc tatggaaaat gacatttcca tttgccttat tgctacttca agctctttaa atcaccatct tccctatttc	A	Homo sapiens
302	4052	Proteinase-Activated Receptor 3	NP_004092.1	MKALIFAAAG LLLLLPTFCQ SGMENDTNNL AKPTLPIKTF RGAPPNSFEE FPFSALEGWT GATITVKIKC PEESASHLHV KNATMGYLTS SLSTKLIPAI YLLVFVVGVP ANAVTLWMLF FRTRSICTTV FYTNLAIADF LFCVTLPFKI AYHLNGNNWV FGEVLCRATT VIFYGNMYCS ILLLACISIN RYLAIVHPFT YRGLPKHTYA LVTCGLVWAT VFLYMLPFFI LKQEYYLVQP DITTCHDVHN TCESSSPFQL YYFISLAFFG FLIPFVLIIY CYAAIIRTLN AYDHRWLWYV	P	Homo sapiens

				KASLLILVIF TICFAPSNII LIIHHANYYY NNTDGLYFIY LIALCLGSLN SCLDPFLYFL MSKTRNHSTA YLTK		
303	4090	G Protein-Coupled Receptor GPR17	NM_005291	ccgacaccca cgggcggaga tcacctgctg ccccgcagac ccctgtccct tcctcccgga ccagcagcta gaggatgtcc aaacggagtt ggtgggctgg atccagaaag cccccaagag agatgctgaa actctcaggc tctgactcca gccaaagcat gaatggcctt gaagtggctc ccccaggtct gatcaccaac ttctccctgg ccacggcaga gcaatgtggc caggagacgc cactggagaa catgctgttc gcctccttct accttctgga ttttatcctg gctttagttg gcaataccct ggctctgtgg cttttcatcc gagaccacaa gtccgggacc ccggccaacg tgttcctgat gcatctggcc gtggccgact tgtcgtgcgt gctggtcctg cccacccgcc tggtctacca cttctctggg aaccactggc catttgggga aatcgcatgc cgtctcaccg gcttcctctt ctacctcaac atgtacgcca gcatctactt cctcacctgc atcagcgccg accgtttcct ggccattgtg cacccggtca agtccctcaa gctccgcagg cccctctacg cacacctggc ctgtgccttc ctgtgggtgg tggtggctgt ggccatggcc ccgctgctgg tgagcccaca gaccgtgcag accaaccaca cggtggtctg cctgcagctg taccgggaga aggcctccca ccatgccctg gtgtccctgg cagtggcctt caccttcccg ttcatcacca cggtcacctg ctacctgctg atcatccgca gcctgcggca gggcctgcgt gtggagaagc gcctcaagac caaggcagtg cgcatgatcg ccatagtgct ggccatcttc ctggtctgct tcgtgcccta ccacgtcaac cgctccgtct acgtgctgca ctaccgcagc catggggcct cctgcgccac ccagcgcatc ctggccctgg caaaccgcat cacctcctgc ctcaccagcc tcaacggggc actcgacccc atcatgtatt tcttcgtggc tgagaagttc cgccacgccc tgtgcaactt gctctgtggc aaaaggctca agggcccgcc ccccagcttc gaagggaaaa ccaacgagag ctcgctgagt gccaagtcag agctgtgagc gggggcgcc gtccaggccg agcgcagact gtttaggact cagcagaccc agcaagaggc atctgccctt tccccagcca cctccccagc aagcaacctg aaatctcagc agatgcccac catttctcta gatcgcctag tctcaaccca taaaaaggaa gaactgacaa aggggatcca tcggccaccc ctctgcaggg gcttgtgatg gctacaatgg ctcctagaca ctcaacgact tcatctgtgg cagggagaga ggaggccgga agaacaaccc ctgaacaatg gaggcctttc tttcccgcta ggctcccagc ctccttcccg ctacagaatc gctcatcggc gaggctcagc agaaagaccc tgaaggcagg ctgcaaatga cccagaagag ggacctggga gtcctggtgg ggacggggag ggagtctcaa tactcctttg cagcgcaagg tactctgagt cccctctgta gtgcctctgc cagacacaca ctgcctgagt tgaagagaca caggccacac atttcaggct ggttgccagc ggacgtcagc actcacggcc tgcggggact cagcacagct ctggattctg gatctctcct gctgtaaccc cacgcacaag cctgcaaccc ccagagctct ttgacaggct cccaggcctc ccagtcctgg acaagcatgt gcagtcacgg gagctcagct caggccaggg ctgggctgtg cacctgcctc ccactgaccc agacccactt cctccagaga ggcctctctc cgcctgagct atttcccttg ctagtgtgca gatatttccc taacatgtcc tttttgtat ttgtttgtac ggaccataaa tataactgta gctttaagac taaaaaaaaa	A	Homo sapiens
304	4090	G Protein-Coupled Receptor GPR17	NP_005282.1	MSKRSWWAGS RKPPREMLKL SGSDSSQSMN GLEVAPPGLI TNFSLATAEQ CGQETPLENM LFASFYLLDF ILALVGNTLA LWLFIRDHKS GTPANVFLMH LAVADLSCVL VLPTRLVYHF SGNHWPFGEI ACRLTGFLFY LNMYASIYFL TCISADRFLA IVHPVKSLKL RRPLYAHLAC AFLWVVVAVA MAPLLVSPQT VQTNHTVVCL QLYREKASHH ALVSLAVAFT FPFITTVTCY	P	Homo sapiens

				LLIIRSLRQG LRVEKRLKTK AVRMIAIVLA IFLVCFVPYH VNRSVYVLHY RSHGASCATQ RILALANRIT SCLTSLNGAL DPIMYFFVAE KFRHALCNLL CGKRLKGPPP SFEGKTNESS LSAKSEL		
305	4254	Rhodopsin	NM_000539	agagtcatcc agctggagcc ctgagtggct gagctcaggc cttcgcagca ttcttgggtg ggagcagcca cgggtcagcc acaagggcca cagccatgaa tggcacagaa ggccctaact tctacgtgcc cttctccaat gcgacgggtg tggtacgcag cccctcgag tacccacagt actacctggc tgagccatgg cagttctcca tgctggccgc ctacatgttt ctgctgatcg tgctgggctt ccccatcaac ttcctcacgc tctacgtcac cgtccagcac aagaagctgc gcacgcctct caactacatc ctgctcaacc tagccgtggc tgacctcttc atggtcctag gtggcttcac cagcaccctc tacacctctc tgcatggata cttcgtcttc gggcccacag gatgcaattt ggagggcttc tttgccaccc tgggcggtga aattgccctg tggtccttgg tggtcctggc catcgagcgg tacgtggtgg tgtgtaagcc catgagcaac ttccgcttcg gggagaacca tgccatcatg ggcgttgcct tcacctgggt catggcgctg gcctgcgccg cacccccact cgccggctgg tccaggtaca tccccgaggg cctgcagtgc tcgtgtggaa tcgactacta cacgctcaag ccggaggtca acaacgagtc ttttgtcatc tacatgttcg tggtccactt caccatcccc atgattatca tctttttctg ctatgggcag ctcgtcttca ccgtcaagga ggccgctgcc cagcagcagg agtcagccac cacacagaag gcagagaagg aggtcacccg catggtcatc atcatggtca tcgctttcct gatctgctgg gtgccctacg ccagcgtggc attctacatc ttcacccacc agggctccaa cttcggtccc atcttcatga ccatcccagc gttctttgcc aagagcgccg ccatctacaa ccctgtcatc tatatcatga tgaacaagca gttccggaac tgcatgctca ccaccatctg ctgcggcaag aacccactgg gtgacgatga ggcctctgct accgtgtcca agacggagac gagccaggtg gccccggcct aagacctgcc taggactctg tggccgacta taggcgtctc ccatccccta caccttcccc cagccacagc catcccacca ggagcagcgc ctgtgcagaa tgaacgaagt cacataggct ccttaatttt tttttttttt ttaagaaata attaatgagg ctcctcactc acctgggaca gcctgagaag ggacatccac caagacctac tgatctggag tcccacgttc cccaaggcca gcgggatgtg tgcccctcct cctcccaact catctttcag gaacacgagg attcttgctt tctggaaaag tgtcccagct tagggataag tgtctagcac agaatggggc acacagtagg tgcttaataa atgctggatg gatgcaggaa ggaatggagg aatgaatggg aagggagaac atatctatcc tctcagaccc tcgcagcagc agcaactcat acttggctaa tgatatggag cagttgtttt tccctccctg ggcctcactt tcttctccta taaaatggaa atcccagatc cctggtcctg ccgacacgca gctactgaga agaccaaaag aggtgtgtgt gtgtctatgt gtgtgtttca gcactttgta aatagcaaga agctgtacag attctagtta atgttgtgaa taacatcaat taatgtaact agttaattac tatgattatc acctcctgat agtgaacatt ttgagattgg gcattcagat gatggggttt cacccaacct tggggcaggt ttttaaaaat tagctaggca tcaaggccag accagggctg gggttgggc tgtaggcagg gacagtcaca ggaatgcagg atgcagtcat cagacctgaa aaaacaacac tgggggaggg ggacggtgaa ggccaagttc ccaatgaggg tgagattggg cctggggtct cacccctagt gtggggcccc aggtcccgtg cctccccttc ccaatgtggc ctatggagag acaggccttt ctctcagcct ctggaagcca cctgctcttt tgctctagca cctgggtccc agcatctaga gcatggagcc tctagaagcc atgctcaccc gcccacattt aattaacagc tgagtccctg atgtcatcct	A	Homo sapiens

				tactcgaaga gcttagaaac aaagagtggg aaattccact gggcctacct tccttgggga tgttcatggg ccccagtttc cagtttccct tgccagacaa gcccatcttc agcagttgct agtccattct ccattctgga gaatctgctc caaaaagctg gccacatctc tgaggtgtca gaattaagct gcctcagtaa ctgctccccc ttctccatat aagcaaagcc agaagctcta gctttaccca gctctgcctg gagactaagg caaattgggc cattaaaagc tcagctccta tgttggtatt aacggtggtg ggttttgttg ctttcacact ctatccacag gatagattga aactgccagc ttccacctga tccctgaccc tgggatggct ggattgagca atgagcagag ccaagcagca cagagtcccc tggggctaga ggtggaggag gcagtcctgg gaatgggaaa aacccca		
306	4254	Rhodopsin	NP_000530.1	MNGTEGPNFY VPFSNATGVV RSPFEYPQYY LAEPWQFSML AAYMFLLIVL GFPINFLTLY VTVQHKKLRT PLNYILLNLA VADLFMVLGG FTSTLYTSLH GYFVFGPTGC NLEGFFATLG GEIALWSLVV LAIERYVVVC KPMSNFRFGE NHAIMGVAFT WVMALACAAP PLAGWSRYIP EGLQCSCGID YYTLKPEVNN ESFVIYMFVV HFTIPMIIIF FCYGQLVFTV KEAAAQQQES ATTQKAEKEV TRMVIIMVIA FLICWVPYAS VAFYIFTHQG SNFGPIFMTI PAFFAKSAAI YNPVIYIMMN KQFRNCMLTT ICCGKNPLGD DEASATVSKT ETSQVAPA	P	Homo sapiens
307	4284	Retinal G Protein-Coupled Receptor RPE	NM_002921	agagacagct gggccactgg cagtgaggga gagtgaggat ggcagagacc agtgccctgc ccactggctt cggggagctc gaggtgctgg ctgtggggat ggtgctactg gtggaagctc tctccggtct cagcctcaat accctgacca tcttctcttt ctgcaagacc ccggagctgc ggactccctg ccacctactg gtgctgagct tggctcttgc ggacagtggg atcagcctga atgccctcgt tgcagccaca tccagccttc tccggcgctg gccctacggc tcggacggct gccaggctca cggcttccag ggctttgtga cagcgttggc cagcatctgc agcagtgcag ccatcgcatg gggcgttat caccactact gcacccgtag ccagctggcc tggaactcag ccgtctctct ggtgctcttc gtgtggctgt cttctgcctt ctgggcagct ctgccccttc tgggttgggg tcactatgac tatgagccac tggggacatg ctgcaccctg gactactcca agggggacag aaacttcacc agcttcctct tcaccatgtc cttcttcaac ttcgccatgc ccctcttcat cacgatcact tcctacagtc tcatggagca gaaactgggg aagagtggcc atctccaggt aaacaccact ctgccagcaa ggacgctgct gctcggctgg ggcccctatg ccatcctgta tctatacgca gtcatcgcag acgtgacttc catctccccc aaactgcaga tggtgcccgc cctcattgcc aaaatggtgc ccacgatcaa tgccatcaac tatgccctgg gcaatgagat ggtctgcagg ggaatctggc agtgcctctc accgcagaag agggagaagg accgaaccaa gtgagcctgc caccctggag tgagccccag gccaggaggc tgttccagga gtcctgccca gcagcctcgg tggccaagcc cagacactca cccaccttcc ccagtggccc cgtggatcct ggtcctaggc tggacacagg attcagaaag acaccaggct gcacagaaag agccagatgg acctgagtgt cggtcacagc cccctacact caaggctgag aggcctcagg aaagtcattc ctttttaaaa ataataataa atgtaagggg gtacagtgca gttttgttac atggatagat tgcctagtgg tgaagtctgg gcttttagtg taaccatcac cctaataata tacgttgtac ccattaagtt atttctcatc cctcaccccc tcccaccttg tcacccttct gagtctccaa tgtctattat tccacactcc atgtccacgt gtacacatta tttagctccc acttacaagt gagaacatgt ggtatttgac tttca	A	Homo sapiens
308	4284	Retinal G Protein-	NP_002912.1	MAETSALPTG FGELEVLAVG MVLLVEALSG LSLNTLTIFS FCKTPELRTP CHLLVLSLAL ADSGISLNAL VAATSSLLRR WPYGSDGCQA HGFQGFVTAL ASICSSAAIA WGRYHHYCTR	P	Homo sapiens

		Coupled Receptor RPE		SQLAWNSAVS LVLFVWLSSA FWAALPLLGW GHYDYEPLGT CCTLDYSKGD RNFTSFLFTM SFFNFAMPLF ITITSYSLME QKLGKSGHLQ VNTTLPARTL LLGWGPYAIL YLYAVIADVT SISPKLQMVP ALIAKMVPTI NAINYALGNE MVCRGIWQCL SPQKREKDRT K		
309	4321	Secretin Receptor	NM_002980	acgaggccgg ccggagcccg ggaccctgcg cggggcgctg agctcccgag cgggcagagg gcacgggcag gcggacgtcg gggcgccctc ggggaacgtg cgggcaccat gcgtccccac ctgtcgccgc cgctgcagca gctactactg ccggtgctgc tcgcctgcgc cgcgcactcg actggagccc ttccccgact atgtgacgtg ctacaagtgc tgtgggaaga gcaagaccag tgcctgcagg aactctccag agagcagaca ggagacctgg gcacggagca gccagtgcca ggttgtgagg ggatgtggga caacataagc tgctggccct cttctgtgcc gggccggatg gtggaggtgg aatgcccgag attcctccgg atgctcacca gcagaaatgg ttccttgttc cgaaactgca cacaggatgg ctggtcagaa accttcccca ggcctaatct ggcctgtggc gttaatgtga acgactcttc caacgagaag cggcactcct acctgctgaa gctgaaagtc atgtacaccg tgggctacag ctcctccctg gtcatgctcc tggtcgccct tggcatcctc tgtgctttcc ggaggctcca ctgcactcgc aactacatcc acatgcacct gttcgtgtcc ttcatccttc gtgccctgtc caacttcatc aaggacgccg tgctcttctc ctcagatgat gtcacctact gcgatccgca cagggcgggc tgcaagctgg tcatggtgct gttccagtac tgcatcatgg ccaactactc ctggctgctg gtggaaggcc tctaccttca cacactcctc gccatctcct tcttctctga aagaaagtac ctccagggat ttgtggcatt cggatggggt tctccagcca tttttgttgc tttgtgggct attgccagac actttctgga agatgttggg tgctgggaca tcaatgccaa cgcatccatc tggtggatca ttcgtggtcc tgtgatcctc tccatcctga ttaatttcat ccttttcata aacattctaa gaatcctgat gagaaaactt agaacccaag aaacaagagg aaatgaagtc agccattata agcgcctggc caggtccact ctcctgctga tcccccctctt tggcatccac tacatcgtct tcgccttctc cccagaggac gctatggaga tccagctgtt ttttgaacta gcccttggct cattccaggg actggtggtg gccgtcctct actgcttcct caatggggag gtgcagctgg aggttcagaa gaagtggcag caatggcacc tccgtgagtt cccactgcac cccgtggcct ccttcagcaa cagcaccaag gccagccact tggagcagag ccagggcacc tgcaggacca gcatcatctg agaggctgga gcagggtcac ccacggacag agaccaagag aggtcctgcg aaggctgggc actgctgtgg gacagccagt cttcccagca gacaccctgt gtcctccttc agctgaagat gcccctcccc aggccttgga ctcttccgaa gggatgtgag gcactgtggg gcaggacaag ggcctgggat ttggttcgtt tgctcttctg ggaagagaag ttcaggggtc ccagaaaggg acagggaaat aaatggtgcc tgggatgaga ttc	A	Homo sapiens
310	4321	Secretin Receptor	NP_002971.1	MRPHLSPPLQ QLLLPVLLAC AAHSTGALPR LCDVLQVLWE EQDQCLQELS REQTGDLGTE QPVPGCEGMW DNISCWPSSV PGRMVEVECP RFLRMLTSRN GSLFRNCTQD GWSETFPRPN LACGVNVNDS SNEKRHSYLL KLKVMYTVGY SSSLVMLLVA LGILCAFRRL HCTRNYIHMH LFVSFILRAL SNFIKDAVLF SSDDVTYCDP HRAGCKLVMV LFQYCIMANY SWLLVEGLYL HTLLAISFFS ERKYLQGFVA FGWGSPAIFV ALWAIARHFL EDVGCWDINA NASIWWIIRG PVILSILINF ILFINILRIL MRKLRTQETR GNEVSHYKRL ARSTLLLIPL FGIHYIVFAF SPEDAMEIQL FFELALGSFQ GLVVAVLYCF LNGEVQLEVQ KKWQQWHLRE FPLHPVASFS NSTKASHLEQ SQGTCRTSII	P	Homo sapiens

311	4480	Somatostatin Receptor Type 1	NM_001049	atgttcccca atggcaccgc ctcctctcct tcctcctctc ctagccccag cccgggcagc tgcggcgaag gcggcggcag caggggcccc ggggccggcg ctgcggacgg catggaggag ccagggcgaa atgcgtccca gaacgggacc ttgagcgagg gccagggcag cgccatcctg atctctttca tctactccgt ggtgtgcctg gtggggctgt gtgggaactc tatggtcatc tacgtgatcc tgcgctatgc caagatgaag acggccacca acatctacat cctaaatctg gccattgctg atgagctgct catgctcagc gtgcccttcc tagtcacctc cacgttgttg cgccactggc ccttcggtgc gctgctctgc cgcctcgtgc tcagcgtgga cgcggtcaac atgttcacca gcatctactg tctgactgtg ctcagcgtgg accgctacgt ggccgtggtg catcccatca aggcggcccg ctaccgccgg cccaccgtgg ccaaggtagt aaacctgggc gtgtgggtgc tatcgctgct cgtcatcctg cccatcgtgg tcttctctcg caccgcggcc aacagcgacg gcacggtggc ttgcaacatg ctcatgccag agcccgctca acgctggctg gtgggcttcg tgttgtacac atttctcatg ggcttcctgc tgcccgtggg ggctatctgc ctgtgctacg tgctcatcat tgctaagatg cgcatggtgg ccctcaaggc cggctggcag cagcgcaagc gctcggagcg caagatcacc ttaatggtga tgatggtggt gatggtgttt gtcatctgct ggatgccttt ctacgtggtg cagctggtta acgtgtttgc tgagcaggac gacgccacgg tgagtcagct gtcggtcatc ctcggctatg ccaacagctg cgccaacccc atcctctatg gctttctctc agacaacttc aagcgctctt tccaacgcat cctatgcctc agctggatgg acaacgccgc ggaggagccg gttgactatt acgccaccgc gctcaagagc cgtgcctaca gtgtggaaga cttccaacct gagaacctgg agtccggcgg cgtcttccgt aatggcacct gcacgtcccg gatcacgacg ctctga	A Homo sapiens
312	4480	Somatostatin Receptor Type 1	NP_001040.1	MFPNGTASSP SSSPSPSPGS CGEGGGSRGP GAGAADGMEE PGRNASQNGT LSEGQGSAIL ISFIYSVVCL VGLCGNSMVI YVILRYAKMK TATNIYILNL AIADELLMLS VPFLVTSTLL RHWPFGALLC RLVLSVDAVN MFTSIYCLTV LSVDRYVAVV HPIKAARYRR PTVAKVVNLG VWVLSLLVIL PIVVFSRTAA NSDGTVACNM LMPEPAQRWL VGFVLYTFLM GFLLPVGAIC LCYVLIIAKM RMVALKAGWQ QRKRSERKIT LMVMMVVMVF VICWMPFYVV QLVNVFAEQD DATVSQLSVI LGYANSCANP ILYGFLSDNF KRSFQRILCL SWMDNAAEEP VDYYATALKS RAYSVEDFQP ENLESGGVFR NGTCTSRITT L	P Homo sapiens
313	4481	Somatostatin Receptor Type 2	NM_001050	atggacatgg cggatgagcc actcaatgga agccacacat ggctatccat tccatttgac ctcaatggct ctgtggtgtc aaccaacacc tcaaaccaga cagagccgta ctatgacctg acaagcaatg cagtcctcac attcatctat tttgtggtct gcatcattgg gttgtgtggc aacacacttg tcatttatgt catcctccgc tatgccaaga tgaagaccat caccaacatt tacatcctca acctggccat cgcagatgag ctcttcatgc tgggtctgcc tttcttggct atgcaggtgg ctctggtcca ctggcccttt ggcaaggcca tttgccgggt ggtcatgact gtggatggca tcaatcagtt caccagcatc ttctgcctga cagtcatgag catcgaccga tacctggctg tggtccaccc catcaagtcg gccaagtgga ggagaccccg gacggccaag atgatcacca tggctgtgtg gggagtctct ctgctggtca tcttgcccat catgatatat gctgggctcc ggagcaacca gtgggggaga agcagctgca ccatcaactg gccaggtgaa tctggggctt ggtacacagg gttcatcatc tacactttca ttctggggtt cctggtaccc ctcaccatca tctgtctttg ctacctgttc attatcatca aggtgaagtc ctctggaatc cgagtgggct cctctaagag gaagaagtct gagaagaagg tcacccgaat ggtgtccatc gtggtggctg tcttcatctt ctgctggctt cccttctaca tattcaacgt ttcttccgtc	A Homo sapiens

				tccatggcca tcagccccac cccagccctt aaaggcatgt ttgactttgt ggtggtcctc acctatgcta acagctgtgc caaccctatc ctatatgcct tcttgtctga caacttcaag aagagcttcc agaatgtcct ctgcttggtc aaggtgagcg gcacagatga tggggagcgg agtgacagta agcaggacaa atcccggctg aatgagacca cggagaccca gaggaccctc ctcaatggag acctccaaac cagtatctga		
314	4481	Somatostatin Receptor Type 2	NP_001041.1	MDMADEPLNG SHTWLSIPFD LNGSVVSTNT SNQTEPYYDL TSNAVLTFIY FVVCIIGLCG NTLVIYVILR YAKMKTITNI YILNLAIADE LFMLGLPFLA MQVALVHWPF GKAICRVVMT VDGINQFTSI FCLTVMSIDR YLAVVHPIKS AKWRRPRTAK MITMAVWGVS LLVILPIMIY AGLRSNQWGR SSCTINWPGE SGAWYTGFII YTFILGFLVP LTIICLCYLF IIIKVKSSGI RVGSSKRKKS EKKVTRMVSI VVAVFIFCWL PFYIFNVSSV SMAISPTPAL KGMFDFVVVL TYANSCANPI LYAFLSDNFK KSFQNVLCLV KVSGTDDGER SDSKQDKSRL NETTETQRTL LNGDLQTSI	P	Homo sapiens
315	4482	Somatostatin Receptor Type 3	NM_001051	atggacatgc ttcatccatc atcggtgtcc acgacctcag aacctgagaa tgcctcctcg gcctggcccc cagatgccac cctgggcaac gtgtcggcgg gcccaagccc ggcagggctg gccgtcagtg gcgttctgat ccccctggtc tacctggtgg tgtgcgtggt gggcctgctg ggtaactcgc tggtcatcta tgtggtcctg cggcacacgg ccagcccttc agtcaccaac gtctacatcc tcaacctggc gctggccgac gagctcttca tgctggggct gcccttcctg gccgcccaga acgccctgtc ctactggccc ttcggctccc tcatgtgccg cctggtcatg gcggtggatg gcatcaacca gttcaccagc atattctgcc tgactgtcat gagcgtggac cgctacctgg ccgtggtaca tcccacccgc tcggcccgct ggcgcacagc tccggtggcc cgcacggtca gcgcggctgt gtgggtggcc tcagccgtgg tggtgctgcc cgtggtggtc ttctcgggag tgccccgcgg catgagcacc tgccacatgc agtggcccga gccggcggcg gcctggcgag ccggcttcat catctacacg gccgcactgg gcttcttcgg gccgctgctg gtcatctgcc tctgctacct gctcatcgtg gtgaaggtgc gctcagctgg gcgccgggtg tgggcaccct cgtgccagcg gcgccggcgc tccgaacgca gggtcacgcg catggtggtg gccgtggtgg cgctcttcgt gctctgctgg atgcccttct acgtgctcaa catcgtcaac gtggtgtgcc cactgcccga ggagcctgcc ttctttgggc tctacttcct ggtggtggcg ctgccctatg ccaacagctg tgccaacccc atcctttatg gcttcctctc ctaccgcttc aagcagggct tccgcagggt cctgctgcgg ccctcccgcc gtgtgcgcag ccaggagccc actgtggggc cccccggagaa gactgaggag gaggatgagg aggaggagga tggggaggag agcagggagg ggggcaaggg gaaggagatg aacggccggg tcagccagat cacgcagcct ggcaccagcg ggcaggagcg gccgcccagc agagtggcca gcaaggagca gcagctccta ccccaagagg cttccactgg ggagaagtcc agcacgatgc gcatcagcta cctgtag	A	Homo sapiens
316	4482	Somatostatin Receptor Type 3	NP_001042.1	MDMLHPSSVS TTSEPENASS AWPPDATLGN VSAGPSPAGL AVSGVLIPLV YLVVCVVGLL GNSLVIYVVL RHTASPSVTN VYILNLALAD ELFMLGLPFL AAQNALSYWP FGSLMCRLVM AVDGINQFTS IFCLTVMSVD RYLAVVHPTR SARWRTAPVA RTVSAAVWVA SAVVVLPVVV FSGVPRGMST CHMQWPEPAA AWRAGFIIYT AALGFFGPLL VICLCYLLIV VKVRSAGRRV WAPSCQRRRR SERRVTRMVV AVVALFVLCW MPFYVLNIVN VVCPLPEEPA FFGLYFLVVA LPYANSCANP ILYGFLSYRF KQGFRRVLLR PSRRVRSQEP TVGPPEKTEE EDEEEEDGEE SREGGKGKEM NGRVSQITQP GTSGQERPPS RVASKEQQLL PQEASTGEKS STMRISYL	P	Homo sapiens

317	4483	Somatostatin Receptor Type 4	NM_001052	atgagcgccc cctcgacgct gccccccggg ggcgaggaag ggctggggac ggcctggccc tctgcagcca atgccagtag cgctccggcg gaggcggagg aggcggtggc ggggcccggg gacgcgcggg cggcgggcat ggtcgctatc cagtgcatct acgcgctggt gtgcctggtg gggctggtgg gcaacgccct ggtcatcttc gtgatccttc gctacgccaa gatgaagacg gctaccacca tctacctgct caacctggcc gtagccgacg agctcttcat gctgagcgtg cccttcgtgg cctcgtcggc cgccctgcgc cactggccct tcggctccgt gctgtgccgc gcggtgctca gcgtcgacgg cctcaacatg ttcaccagcg tcttctgtct caccgtgctc agcgtggacc gctacgtggc cgtggtgcac cctctgcgcg cggcgaccta ccggcggccc agcgtggcca agctcatcaa cctgggcgtg tggctggcat ccctgttggt cactctcccc atcgccatct tcgcagacac cagaccggct cgcggcggcc aggccgtggc ctgcaacctg cagtggccac acccggcctg gtcggcagtc ttcgtggtct acactttcct gctgggcttc ctgctgcccg tgctggccat tggcctgtgc tacctgctca tcgtgggcaa gatgcgcgcc gtggccctgc gcgctggctg gcagcagcgc aggcgctcgg agaagaaaat caccaggctg gtgctgatgg tcgtggtcgt ctttgtgctc tgctggatgc ctttctacgt ggtgcagctg ctgaacctcg tcgtgaccag ccttgatgcc accgtcaacc acgtgtccct tatcctcagc tatgccaaca gctgcgccaa ccctattctc tatggcttcc tctccgacaa cttccgccga tccttccagc gggttctctg cctgcgctgc tgcctcctgg aaggtgctgg aggtgctgag gaggagcccc tggactacta tgccactgct ctcaagagca aaggtggggc agggtgcatg tgcccccccac taaaatgcca gcaggaagcc ctgcaaccag aacccggccg caagcgcatc cccctcacca ggaccaccac cttctga	A	Homo sapiens
318	4483	Somatostatin Receptor Type 4	NP_001043.1	MSAPSTLPPG GEEGLGTAWP SAANASSAPA EAEEAVAGPG DARAAGMVAI QCIYALVCLV GLVGNALVIF VILRYAKMKT ATTIYLLNLA VADELFMLSV PFVASSAALR HWPFGSVLCR AVLSVDGLNM FTSVFCLTVL SVDRYVAVVH PLRAATYRRP SVAKLINLGV WLASLLVTLP IAIFADTRPA RGGQAVACNL QWPHPAWSAV FVVYTFLLGF LLPVLAIGLC YLLIVGKMRA VALRAGWQQR RRSEKKITRL VLMVVVVFVL CWMPFYVVQL LNLVVTSLDA TVNHVSLILS YANSCANPIL YGFLSDNFRR SFQRVLCLRC CLLEGAGGAE EEPLDYYATA LKSKGGAGCM CPPLKCQQEA LQPEPGRKRI PLTRTTTF	P	Homo sapiens
319	4484	Somatostatin Receptor Type 5	NM_001053	atggagcccc tgttcccagc ctccacgccc agctggaacg cctcctcccc gggggctgcc tctggaggcg gtgacaacag gacgctggtg ggcccggcgc cctcggcagg ggcccgggcg gtgctggtgc ccgtgctgta cctgctggtg tgtgcggccg ggctgggcgg gaacacgctg gtcatctacg tggtgctgcg cttcgccaag atgaagaccg tcaccaacat ctacattctc aacctggcag tggccgacgt cctgtacatg ctggggctgc ctttcctggc cacgcagaac gccgcgtcct tctggccctt cggccccgtc ctgtgccgcc tggtcatgac gctggacggc gtcaaccagt tcaccagtgt cttctgcctg acagtcatga gcgtggaccg ctacctggca gtggtgcacc cgctgagctc ggcccgctgg cgccgcccgc gtgtggccaa gctggcgagc gccgcggcct gggtcctgtc tctgtgcatg tcgctgccgc tcctggtgtt cgcggacgtg caggagggcg gtacctgcaa cgccagctgg ccggagcccg tggggctgtg ggcgccgtc ttcatcatct acacggccgt gctgggcttc ttcgcgccgc tgctggtcat ctgcctgtgc tacctgctca tcgtggtgaa ggtgagggcg gcgggcgtgc gcgtgggctg cgtgcggcgg cgctcggagc ggaaggtgac gcgcatggtg ttggtggtgg tgctggtgtt tgcgggatgt tggctgccct tcttcaccgt caacatcgtc aacctggccg tggcgctgcc ccaggagccc	A	Homo sapiens

				gcctccgccg gcctctactt cttcgtggtc atcctctcct acgccaacag ctgtgccaac cccgtcctct acggcttcct ctctgacaac ttccgccaga gcttccagaa ggttctgtgc ctccgcaagg gctctggtgc caaggacgct gacgccacgg agccgcgtcc agacaggatc cggcagcagc aggaggccac gccgcccgcg caccgcgccg cagccaacgg gcttatgcag accagcaagc tgtga		
320	4484	Somatostatin Receptor Type 5	NP_001044.1	MEPLFPASTP SWNASSPGAA SGGGDNRTLV GPAPSAGARA VLVPVLYLLV CAAGLGGNTL VIYVVLRFAK MKTVTNIYIL NLAVADVLYM LGLPFLATQN AASFWPFGPV LCRLVMTLDG VNQFTSVFCL TVMSVDRYLA VVHPLSSARW RRPRVAKLAS AAAWVLSLCM SLPLLVFADV QEGGTCNASW PEPVGLWGAV FIIYTAVLGF FAPLLVICLC YLLIVVKVRA AGVRVGCVRR RSERKVTRMV LVVVLVFAGC WLPFFTVNIV NLAVALPQEP ASAGLYFFVV ILSYANSCAN PVLYGFLSDN FRQSFQKVLC LRKGSGAKDA DATEPRPDRI RQQQEATPPA HRAAANGLMQ TSKL	P	Homo sapiens
321	4552	Tachykinin Receptor 1	NM_001058	aattcagagc caccgcgggc aggcgggcag tgcatccaga agcgtttata ttctgagcgc cagttcagct ttcaaaaaga gtgctgccca taaaaagcct tccaccctcc tgtctgcttt agaaggaccc tgagccccag gcgccagcca caggactctg ctgcagaggg gggttgtgta cagatagtag gctttacgcc tagcttcgaa atggataacg tcctcccggt ggactcagac ctctccccaa acatctccac taacacctcg gaacccaatc agttcgtgca accagcctgg caaattgtcc tttgggcagc tgcctacacg gtcattgtgg tgacctctgt ggtgggcaac gtggtagtga tgtggatcat cttagcccac aaaagaatga ggacagtgac gaactatttt ctggtgaacc tggccttcgc ggaggcctcc atggctgcat tcaatacagt ggtgaacttc acctatgctg tccacaacga atggtactac ggcctgttct actgcaagtt ccacaacttc tttcccatcg ccgctgtctt cgccagtatc tactccatga cggctgtggc ctttgatagg tacatggcca tcatacatcc cctccagccc cggctgtcag ccacagccac caaagtggtc atctgtgtca tctgggtcct ggctctcctg ctggccttcc cccagggcta ctactcaacc acagagacca tgcccagcag agtcgtgtgc atgatcgaat ggccagagca tccgaacaag atttatgaga aagtgtacca catctgtgtg actgtgctga tctacttcct cccccctgctg gtgattggct atgcatacac cgtagtggga atcacactat gggccagtga gatccccggg gactcctctg accgctacca cgagcaagtc tctgccaagc gcaaggtggt caaaatgatg attgtcgtgg tgtgcacctt cgccatctgc tggctgccct tccacatctt cttcctcctg ccctacatca acccagatct ctacctgaag aagtttatcc agcaggtcta cctggccatc atgtggctgg ccatgagctc caccatgtac aaccccatca tctactgctg cctcaatgac aggttccgtc tgggcttcaa gcatgccttc cggtgctgcc ccttcatcag cgccggcgac tatgaggggc tggaaatgaa atccacccgg tatctccaga cccagggcag tgtgtacaaa gtcagccgcc tggagaccac catctccaca gtggtggggg cccacgagga ggagccagag gacggcccca aggccacacc ctcgtccctg gacctgacct ccaactgctc ttcacgaagt gactccaaga ccatgacaga gagcttcagc ttctcctcca atgtgctctc ctaggccaca gggcctttgg caggtgcagc ccccactgcc tttgacctgc ctcccttcat gcatggaaat tcccttcatc tggaaccatc agaaacaccc tcacactggg acttgcaaaa agggtcagta tgggttaggg aaaacattcc atccttgagt caaaaaatct caattcttcc ctatctttgc caccctcatg ctgtgtgact caaaccaaat cactgaactt tgctgagcct gtaaaataaa aggtcggacc agcttttcct caagagccca atgcattcca tttctggaag tgactttggc	A	Homo sapiens

				tgcatgcgag tgctcatttc aggatg		
322	4552	Tachykinin Receptor 1	NP_001049.1	MDNVLPVDSD LSPNISTNTS EPNQFVQPAW QIVLWAAAYT VIVVTSVVGN VVVMWIILAH KRMRTVTNYF LVNLAFAEAS MAAFNTVVNF TYAVHNEWYY GLFYCKFHNF FPIAAVFASI YSMTAVAFDR YMAIIHPLQP RLSATATKVV ICVIWVLALL LAFPQGYYST TETMPSRVVC MIEWPEHPNK IYEKVYHICV TVLIYFLPLL VIGYAYTVVG ITLWASEIPG DSSDRYHEQV SAKRKVVKMM IVVVCTFAIC WLPFHIFFLL PYINPDLYLK KFIQQVYLAI MWLAMSSTMY NPIIYCCLND RFRLGFKHAF RCCPFISAGD YEGLEMKSTR YLQTQGSVYK VSRLETTIST VVGAHEEEPE DGPKATPSSL DLTSNCSSRS DSKTMTESFS FSSNVLS	P	Homo sapiens
323	4687	Thrombin Receptor	NM_001992	ggcggggggc gcacagagcc agaggggctt gcgagcggcg gctgagggac cgcggggagg gggcgccgag cggctccagc gcagagactc tcactgcacg ccggaggccc cttcctcgct ccgcccgcgc gaccgcgcgc cccagtcccg ccccgccccg ctaaccgccc cagacacagc gctcgccgag ggtcgcttgg accctgatct tacccgtggg caccctgcgc tctgcctgcc gcgaagaccg gctccccgac ccgcagaagt caggagagag ggtgaagcgg agcagcccga ggcggggcag cctcccggag cagcgccgcg cagagcccgg gacaatgggg ccgcggcggc tgctgctggt ggccgcctgc ttcagtctgt gcggcccgct gttgtctgcc cgcacccggg cccgcaggcc agaatcaaaa gcaacaaatg ccaccttaga tccccggtca tttcttctca ggaaccccaa tgataaatat gaaccatttt gggaggatga ggagaaaaat gaaagtgggt taactgaata cagattagtc tccatcaata aaagcagtcc tcttcaaaaa caacttcctg cattcatctc agaagatgcc tccggatatt tgaccagctc ctggctgaca ctctttgtcc catctgtgta caccggagtg tttgtagtca gcctcccact aaacatcatg gccatcgttg tgttcatcct gaaaatgaag gtcaagaagc cggcggtggt gtacatgctg cacctggcca cggcagatgt gctgtttgtg tctgtgctcc cctttaagat cagctattac ttttccggca gtgattggca gtttgggtct gaattgtgtc gcttcgtcac tgcagcattt tactgtaaca tgtacgcctc tatcttgctc atgacagtca taagcattga ccggtttctg gctgtggtgt atcccatgca gtccctctcc tggcgtactc tgggaagggc ttccttcact tgtctggcca tctgggcttt ggccatcgca ggggtagtgc ctctcgtcct caaggagcaa accatccagg tgcccgggct caacatcact acctgtcatg atgtgctcaa tgaaaccctg ctcgaaggct actatgccta ctacttctca gccttctctg ctgtcttctt ttttgtgccg ctgatcattt ccacggtctg ttatgtgtct atcattcgat gtcttagctc ttccgcagtt gccaaccgca gcaagaagtc ccgggctttg ttcctgtcag ctgctgtttt ctgcatcttc atcatttgct tcggacccac aaacgtcctc ctgattgcgc attactcatt cctttctcac acttccacca cagaggctgc ctactttgcc tacctcctct gtgtctgtgt cagcagcata agctcgtgca tcgacccccct aatttactat tacgcttcct ctgagtgcca gaggtacgtc tacagtatct tatgctgcaa agaaagttcc gatcccagca gttataacag cagtgggcag ttgatggcaa gtaaaatgga tacctgctct agtaacctga ataacagcat atacaaaaag ctgttaactt aggaaaaggg actgctggga ggttaaaaag aaaagtttat aaaagtgaat aacctgagga ttctattagt ccccacccaa actttattga ttcacctcct aaaacaacag atgtacgact tgcatacctg ctttttatgg gagctgtcaa gcatgtattt ttgtcaatta ccagaaagat aacaggacga gatgacggtg ttattccaag ggaatattgc caatgctaca gtaataaatg aatgtcactt ctggatatag ctaggtgaca tatacatact tacatgtgtg tatatgtaga	A	Homo sapiens

				tgtatgcaca cacatatatt atttgcagtg cagtatagaa taggcacttt aaaacactct ttccccgcac cccagcaatt atgaaaataa tctctgattc cctgatttaa tatgcaaagt ctaggttggt agagtttagc cctgaacatt tcatggtgtt catcaacagt gagagactcc atagtttggg cttgtaccac ttttgcaaat aagtgtattt tgaaattgtt tgacggcaag gtttaagtta ttaagaggta agacttagta ctatctgtgc gtagaagttc tagtgttttc aattttaaac atatccaagt ttgaattcct aaaattatgg aaacagatga aaagcctctg ttttgatatg ggtagtattt tttacatttt acacactgta cacataagcc aaaactgagc ataagtcctc tagtgaatgt aggctggctt tcagagtagg ctattcctga gagctgcatg tgtccgcccc cgatggagga ctccaggcag cagacacatg ccagggccat gtcagacaca gattggccag aaaccttcct gctgagcctc acagcagtga gactggggcc actacatttg ctccatcctc ctgggattgg ctgtgaactg atcatgttta tgagaaactg gcaaagcaga atgtgatatc ctaggaggta atgaccatga aagacttctc tacccatctt aaaaacaacg aaagaaggca tggacttctg gatgcccatc cactgggtgt aaacacatct agtagttgtt ctgaaatgtc agttctgata tggaagcacc cattatgcgc tgtggccact ccaataggtg ctgagtgtac agagtggaat aagacagaga cctgccctca agagcaaagt agatcatgca tagagtgtga tgtatgtgta ataaatatgt ttcacacaaa caaggcctgt cagctaaaga agtttgaaca tttgggttac tatttcttgt ggttataact taatgaaaac aatgcagtac aggacatata ttttttaaaa taagtctgat ttaattgggc actatttatt tacaaatgtt ttgctcaata gattgctcaa atcaggtttt cttttaagaa tcaatcatgt cagtctgctt agaaataaca gaagaaaata gaattgacat tgaaatctag gaaaattatt ctataatttc catttactta agacttaatg agactttaaa agcatttttt aacctcctaa gtatcaagta tagaaaatct tcatggaatt cacaaagtaa tttggaaatt aggttgaaac atatctctta tcttacgaaa aaatggtagc attttaaaca aaatagaaag ttgcaaggca aatgtttatt taaaagagca ggccaggcgc ggtggctcac gcctgtaatc ccagcacttt gggaggctga ggcgggtgga tcacgaggtc aggagatcga gaccatcctg gctaacacgg tgaaacccgt ctctactaaa aatgcaaaaa aaattagccg ggcgtggtgg caggcacctg tagtcccagc tactcgggag gctgaggcag gagactggcg tgaacccagg aggcggacct tgtagtgagc cgagatcgcg ccactgtgct ccagcctggg caacagagca agactccatc tc		
324	4687	Thrombin Receptor	NP_001983.1	MGPRRLLLVA ACFSLCGPLL SARTRARRPE SKATNATLDP RSFLLRNPND KYEPFWEDEE KNESGLTEYR LVSINKSSPL QKQLPAFISE DASGYLTSSW LTLFVPSVYT GVFVVSLPLN IMAIVVFILK MKVKKPAVVY MLHLATADVL FVSVLPFKIS YYFSGSDWQF GSELCRFVTA AFYCNMYASI LLMTVISIDR FLAVVYPMQS LSWRTLGRAS FTCLAIWALA IAGVVPLVLK EQTIQVPGLN ITTCHDVLNE TLLEGYYAYY FSAFSAVFFF VPLIISTVCY VSIIRCLSSS AVANRSKKSR ALFLSAAVFC IFIICFGPTN VLLIAHYSFL SHTSTTEAAY FAYLLCVCVS SISSCIDPLI YYYASSECQR YVYSILCCKE SSDPSSYNSS GQLMASKMDT CSSNLNNSIY KKLLT	P	Homo sapiens
325	4734	Thyrotropin Releasing Hormone Receptor	NM_003301	tagcttcaag ccactgaaga tggaaaacga gacagtcagt gaactgaacc aaacacagct tcagccacga gcagtggtgg ccttagaata ccaggtggtc accatcttac ttgtactcat tatttgtggc ctgggcattg taggcaacat catggtagtc ctggttgtca tgagaaccaa gcacatgagg acccccacaa actgctacct ggtgagcctg gcagtagctg atctcatggt cttggtggcc gcaggcctcc ccaacataac agacagtatc tacggttcct gggtctatgg	A	Homo sapiens

				ctatgttgga tgcctctgca ttacttacct ccagtatttg ggaattaatg catcctcttg ttcaataaca gcctttacca ttgagaggta catagcaatc tgtcacccca tcaaagccca gtttctctgc acattttcca gagccaaaaa gattatcatc tttgtctggg ctttcacatc tctttactgt atgctctggt tcttcttgct ggatctcaat attagcacct acaaagatgc tattgtgata tcctgtggct acaagatctc caggaattac tactcaccta tttacctaat ggactttggt gtcttttatg ttgtgccaat gatcctggct accgtcctct atggattcat agctagaatc cttttcttaa atcccattcc ttcagatcct aaagaaaact ctaagacatg gaaaaatgat tcaacccatc agaacacaaa tctgaatgta aatacctcta atagatgttt caacagcaca gtatcttcaa ggaagcaggt caccaagatg ctggcagtgg ttgtaattct gtttgccctt ttatggatgc cctacaggac tctagtggtt gtcaactcat ttctctccag tcctttccaa gaaaattggt tttgctcttt ttgcagaatt tgcatttatc tcaacagtgc catcaacccg gtgatttaca atctcatgtc ccagaaattc cgtgcagcct tcagaaagct ctgcaactgc aagcagaagc caacagagaa acctgctaac tacagtgtgg ccctaaatta cagcgtcatc aaggagtcag accatttcag cacagagctt gatgatatca ctgtcactga cacttacctg tctgccacaa aagtgtcttt tgatgacacc tgcttggctt ctgaggtatc ctttagccaa agttgattca tgaattagaa gaaaatggat gacaaagaaa ttgagaatct gtgcagtcat caacaaaagg gagaacatgg ccaatagtca tatgtgaaga cagagcagat cagtctttgt caatgctcta acaaaccg		
326	4734	Thyrotropin Releasing Hormone Receptor	NP_003292.1	MENETVSELN QTQLQPRAVV ALEYQVVTIL LVLIICGLGI VGNIMVVLVV MRTKHMRTPT NCYLVSLAVA DLMVLVAAGL PNITDSIYGS WVYGYVGCLC ITYLQYLGIN ASSCSITAFT IERYIAICHP IKAQFLCTFS RAKKIIIFVW AFTSLYCMLW FFLLDLNIST YKDAIVISCG YKISRNYYSP IYLMDFGVFY VVPMILATVL YGFIARILFL NPIPSDPKEN SKTWKNDSTH QNTNLNVNTS NRCFNSTVSS RKQVTKMLAV VVILFALLWM PYRTLVVVNS FLSSPFQENW FLLFCRICIY LNSAINPVIY NLMSQKFRAA FRKLCNCKQK PTEKPANYSV ALNYSVIKES DHFSTELDDI TVTDTYLSAT KVSFDDTCLA SEVSFSQS	P	Homo sapiens
327	4944	Angiotensin II Type 1 Receptor	NM_000685	attcggagct gcctcctcgc caatgattcc agcgcctgac agccaggacc ccaggcagca gcgagtgaca ggacgtctgg accggcgcgc cgctagcagc tctgccgggc cgcggcggtg atcgatgggg agcggctgga gcggacccag cgagtgaggg cgcacagccg ggacgccgag gcggcgggcg ggagacccgc accagcgcag ccggccctcg gcgggacgtg acgcagcgcc cggggcgcgg gtttgatatt tgacaaattg atctaaaatg gctgggtttt tatctgaata actcactgat gccatcccag aaagtcggca ccaggtgtat ttgatatagt gtttgcaaca aattcgaccc aggtgatcaa aatgattctc aactcttcta ctgaagatgg tattaaaaga atccaagatg attgtcccaa agctggaagg cataattaca tatttgtcat gattcctact ttatacagta tcatctttgt ggtgggaata tttggaaaca gcttggtggt gatagtcatt tacttttata tgaagctgaa gactgtggcc agtgttttc ttttgaattt agcactggct gacttatgct ttttactgac tttgccacta tgggctgtct acacagctat ggaataccgc tggccctttg gcaattacct atgtaagatt gcttcagcca gcgtcagttt caacctgtac gctagtgtgt ttctactcac gtgtctcagc attgatcgat acctggctat tgttcaccca atgaagtccc gccttcgacg cacaatgctt gtagccaaag tcacctgcat catcatttgg ctgctggcag gcttggccag tttgccagct ataatccatc gaaatgtatt tttcattgag aacaccaata ttacagtttg tgctttccat tatgagtccc aaaattcaac ccttccgata	A	Homo sapiens

				gggctgggcc tgaccaaaaa tatactgggt ttcctgtttc cttttctgat cattcttaca agttatactc ttatttggaa ggccctaaag aaggcttatg aaattcagaa gaacaaacca agaaatgatg atatttttaa gataattatg gcaattgtgc ttttcttttt cttttcctgg attccccacc aaatattcac ttttctggat gtattgattc aactaggcat catacgtgac tgtagaattg cagatattgt ggacacggcc atgcctatca ccatttgtat agcttatttt aacaattgcc tgaatcctct tttttatggc tttctgggga aaaaatttaa aagatatttt ctccagcttc taaaatatat tcccccaaaa gccaaatccc actcaaacct ttcaacaaaa atgagcacgc tttcctaccg cccctcagat aatgtaagct catccaccaa gaagcctgca ccatgttttg aggttgagtg acatgttcga aacctgtcca taaagtaatt ttgtgaaaga aggagcaaga gaacattcct ctgcagcact tcactaccaa atgagcatta gctacttttc agaattgaag gagaaaatgc attatgtgga ctgaaccgac ttttctaaag ctctgaacaa aagcttttct ttcctttgc aacaagacaa agcaaagcca cattttgcat tagacagatg acggctgctc gaagaacaat gtcagaaact cgatgaatgt gttgatttga gaaattttac tgacagaaat gcaatctccc tagcctgctt ttgtcctgtt attttttatt tccacataaa ggtatttaga atatattaaa tcgttagagg agcaacagga gatgagagtt ccagattgtt ctgtccagtt tccaaagggc agtaaagttt tcgtgccggt tttcagctat tagcaactgt gctacacttg cacctggtac tgcacatttt gtacaaagat atgctaagca gtagtcgtca agttgcagat ctttttgtga aattcaacct gtgtcttata ggtttacact gccaaaacaa tgcccgtaag atggcttatt tgtataatgg tgttactaaa gtcacatata aaagttaaac tacttgtaaa ggtgctgcac tggtcccaag tagtagtgtc ctcctagtat attagtttga tttaatatct gagaagtgta tatagtttgt ggtaaaaaga ttatatatca taaagtatgc cttcctgttt aaaaaaagta tatattctac acatatatat atatgtatat ctatatctct aaactgctgt taattgatta aaatctggca aagttatatt tactttaaaa taaaataatt ttattgc		
328	4944	Angiotensin II Type 1 Receptor	NP_000676.1	MILNSSTEDG IKRIQDDCPK AGRHNYIFVM IPTLYSIIFV VGIFGNSLVV IVIYFYMKLK TVASVFLLNL ALADLCFLLT LPLWAVYTAM EYRWPFGNYL CKIASASVSF NLYASVFLLT CLSIDRYLAI VHPMKSRLRR TMLVAKVTCI IIWLLAGLAS LPAIIHRNVF FIENTNITVC AFHYESQNST LPIGLGLTKN ILGFLFPFLI ILTSYTLIWK ALKKAYEIQK NKPRNDDIFK IIMAIVLFFF FSWIPHQIFT FLDVLIQLGI IRDCRIADIV DTAMPITICI AYFNNCLNPL FYGFLGKKFK RYFLQLLKYI PPKAKSHSNL STKMSTLSYR PSDNVSSSTK KPAPCFEVE	P	Homo sapiens
329	4946	Angiotensin II Type 2 Receptor	NM_000686	acgtcccagc gtctgagaga acgagtaagc aagaattcaa agcattctgc agcctgaatt ttgaaggagt gtgtttaggc actaagcaag ctgatttatg ataactgctt taaacttcaa caaccaaagg cataagaact aggagctgct gacatttcaa tatgaagggc aactccaccc ttgccactac tagcaaaaac attaccagcg gtcttcactt cgggcttgtg aacatctctg gcaacaatga gtctaccttg aactgttcac agaaaccatc agataagcat ttagatgcaa ttcctattct ttactacatt atatttgtaa ttggatttct ggtcaatatt gtcgtggtta cactgttttg ttgtcaaaag ggtcctaaaa aggtttctag catatacatc ttcaacctcg ctgtggctga tttactcctt ttggctactc ttcctctatg ggcaacctat tattcttata gatatgactg gctctttgga cctgtgatgt gcaaagtttt tggttctttt cttaccctga acatgtttgc aagcattttt tttatcacct gcatgagtgt tgataggtac caatctgtca tctacccctt tctgtctcaa agaagaaatc cctggcaagc atcttatata gttcccttg	A	Homo sapiens

				tttggtgtat ggcctgtttg tcctcattgc caacatttta ttttcgagac gtcagaacca ttgaatactt aggagtgaat gcttgcatta tggctttccc acctgagaaa tatgcccaat ggtcagctgg gattgcctta atgaaaaata tccttggttt tattatccct ttaatattca tagcaacatg ctattttgga attagaaaac acttactgaa gacgaatagc tatgggaaga acaggataac ccgtgaccaa gtcctgaaga tggcagctgc tgttgttctg gccttcatca tttggtgcct tcccttccat gttctgacct tcctggatgc tctggcctgg atgggtgtca ttaatagctg cgaagttata gcagtcattg acctggcact tccttttgcc atcctcttgg gattcaccaa cagctgcgtt aatccgtttc tgtattgttt tgttggaaac cggttccaac agaagctccg cagtgtgttt agggttccaa ttacttggct ccaagggaaa agagagagta tgtcttgccg gaaaagcagt tctcttagag aaatggagac ctttgtgtct taaacggaga gcaaaatgca tgtaatcaac atggctactt gctttgaggc tcaccagaat tatttttaag tggttttaat aaaataataa aatttcccct aatcttttct gaatcttctg aaaccaaatg taactatgtt tatcgtccag tgactttcag gaatgcccat tgttttctga tatgtttgta caagatttca ttggtgagac atatttacaa cctagaagta actggtgata tatctcaaat tgtaattaat aatagattgt gaataatgat ttggggattc agatttctct ttgaaacatg cttgtgtttc ttagtggggt tttatatcca tttttatcag gatttcctct tgaaccagaa ccagtctttc aactcattgc atcatttaca agacaacatt gtaagagaga tgagcacttc taagttgagt atattataat agattagtac tggattattc aggctttagg catatgcttc tttaaaaacg ctataaatta tattcctctt gcatttcact tgagtggagg tttatagtta atctataact acatattgaa tagggctagg aatatagatt aaatcatact cctatgcttt agcttatttt tacagttata gaaagcaaga tgtactataa catagaattg caatctataa tatttgtgtg ttcactaaac tctgaataag cactttttaa aaaactttct actcatttta atgattgttt aaaggtttct attttctctg atactttttt gaaatcagta aacactgtgt attgttgtaa aatgtaaagg tcacttttca catccttgac ttttagatg tgctgctttg atatatagga cattgatttg atttttatta ttaatgcttt ggttctgggt tgtttcctaa aatatctggg tggcttaaaa aaaactcttt aacttgtaat aaacccttaa ctggcatagg aaatggtatc cagaatggaa ttttgctaca tggggtctgg gtgggggcaa agagacccag tcaattacat gtttggtacc aagaaaggaa cctgtcaggg cagtacaatg tgactttgaa aatatatacc gtgggggtag ttttacccta tatctataaa cactgtttgt tccagaatct gtatgattct atggagctat tttaaaccaa ttgcaggtct aga		
330	4946	Angiotensin II Type 2 Receptor	NP_000677.1	MKGNSTLATT SKNITSGLHF GLVNISGNNE STLNCSQKPS DKHLDAIPIL YYIIFVIGFL VNIVVVTLFC CQKGPKKVSS IYIFNLAVAD LLLLATLPLW ATYYSYRYDW LFGPVMCKVF GSFLTLNMFA SIFFITCMSV DRYQSVIYPF LSQRRNPWQA SYIVPLVWCM ACLSSLPTFY FRDVRTIEYL GVNACIMAFP PEKYAQWSAG IALMKNILGF IIPLIFIATC YFGIRKHLLK TNSYGKNRIT RDQVLKMAAA VVLAFIIWCL PFHVLTFLDA LAWMGVINSC EVIAVIDLAL PFAILLGFTN SCVNPFLYCF VGNRFQQKLR SVFRVPITWL QGKRESMSCR KSSSLREMET FVS	P	Homo sapiens
331	5072	Pyrimidinergic Receptor P2Y4	NM_002565	atggccagta cagagtcctc cctgttgaga tccctaggcc tcagcccagg tcctggcagc agtgaggtgg agctggactg ttggtttgat gaggatttca agttcatcct gctgcctgtg agctatgcag ttgtctttgt gctgggcttg ggccttaacg ccccaaccct atggctcttc atcttccgcc tccgaccctg ggatgcaacg gccacctaca tgttccacct ggcattgtca	A	Homo sapiens

				gacaccttgt atgtgctgtc gctgcccacc ctcatctact attatgcagc ccacaaccac tggccctttg gcactgagat ctgcaagttc gtccgctttc ttttctattg gaacctctac tgcagtgtcc ttttcctcac ctgcatcagc gtgcaccgct acctgggcat ctgccaccca cttcgggcac tacgctgggg ccgccctcgc ctcgcaggcc ttctctgcct ggcagtttgg ttggtcgtag ccggctgcct cgtgcccaac ctgttctttg tcacaaccag caacaaaggg accaccgtcc tgtgccatga caccactcgg cctgaagagt ttgaccacta tgtgcacttc agctcggcgg tcatggggct gctctttggc gtgccctgcc tggtcactct tgtttgctat ggactcatgg ctcgtcgcct gtatcagccc ttgccaggct ctgcacagtc gtcttctcgc ctccgctctc tccgcaccat agctgtggtg ctgactgtct ttgctgtctg cttcgtgcct ttccacatca cccgcaccat ttactacctg gccaggctgt tggaagctga ctgccgagta ctgaacattg tcaacgtggt ctataaagtg actcggcccc tggccagtgc caacagctgc ctggatcctg tgctctactt gctcactggg gacaaatatc gacgtcagct ccgtcagctc tgtggtggtg gcaagcccca gccccgcacg gctgcctctt ccctggcact agtgtccctg cctgaggata gcagctgcag gtgggcggcc accccccagg acagtagctg ctctactcct agggcagata gattgtaa		
332	5072	Pyrimidinergic Receptor P2Y4	NP_002556.1	MASTESSLLR SLGLSPGPGS SEVELDCWFD EDFKFILLPV SYAVVFVLGL GLNAPTLWLF IFRLRPWDAT ATYMFHLALS DTLYVLSLPT LIYYYAAHNH WPFGTEICKF VRFLFYWNLY CSVLFLTCIS VHRYLGICHP LRALRWGRPR LAGLLCLAVW LVVAGCLVPN LFFVTTSNKG TTVLCHDTTR PEEFDHYVHF SSAVMGLLFG VPCLVTLVCY GLMARRLYQP LPGSAQSSSR LRSLRTIAVV LTVFAVCFVP FHITRTIYYL ARLLEADCRV LNIVNVVYKV TRPLASANSC LDPVLYLLTG DKYRRQLRQL CGGGKPQPRT AASSLALVSL PEDSSCRWAA TPQDSSCSTP RADRL	P	Homo sapiens
333	5117	Vasopressin V1A Receptor	NM_000706	taattgcttg aaggattttt tccagacagg tggtctggaa accttttacc tattaccttc catccctgaa ccatttcaat cttctgcctc ctggatatct tggagaaaat gaaccaacac aacacagctt tcagttttta gagcatttcc cccatacaga acattgtctt acttgatctt cccgatgacc tcaacaacag gaaaggcagg tcctttcatt tccatttata agacgcacag acccaggatt atctagccac aggaagcagg actccagatt tcaagtccag catctcaacg tgacaacctt ggtaactctg catgaacgga ctggatagta aagtggaatt attactgaga actgcaatga ataaaatctt ttgcattttt tgcctacgtt tcacagaggg tgatattttt ctgaggcaat taaatttata ccacggccac aatactgaaa cgttctgacc aacaaagtca tgctcctgca tctacacagc agataactgc agaaacggct tcctttcttc cttgtaaaat tgcctgaaaa cagctccccc ttgctgtccg tcgaggcata tcttcaccaa cgttaaaaca gagctgaggg agatcgcatt tctgcctccc tcccgccctg cagaggggct ccagctgttc agagtaacgg attactaggt aggtggttgt ttcccctcct tcccagggcc tctttcctct ctttgagatt gcctctttct tactcctgag cacaggagcc gggcgggttt tctgtccctt gccctggaca gcactgcctg gatggccgct gtccggcagc tgctctttgt ccacccaaaa agatgtcccc acgactcagt agtaaccaga cggtccccac ggaccactgc ggccaaattt ccgccatccc cgctgtggga atcaggcttt tcccgcagaa aaccccagga atctagagaa aactccttaa gtccctagtc tccatagaga aaaccaggag acactccccc caaaccccgc tgtgaataca ggcacagcag ccactggggc ctgaaagtga tgagtgcgtt cttcccgtcg caaacatagg gtaataaata gcatgcatca aagacgttac taggaagaga tagctcttta	A	Homo sapiens

agtcacgagg ggggagaaat gtttgccccg ggaaaatttg cctggggaat aaaatttgcc
agactgctgc acgggtgagc tcggtgagaa ggaagaaacc cggactggag gaggtgaggt
cgagagccag gttcaggtgc aggagctaga tgcgtggacg ccggtgcgtg gactggaggt
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tcagttgtcc aagtttttgg aagggaaaag cgggaaagcg ccacgatccc acctactgtg
aggaggaatc tgcgagtctc ccagctccac cccctccaca gtgatgcaga ggacaaacac
cgacgtaggg agaggaaaaa ataaaactcc agggagcggg gagtaggcaa ccagcagtct
tccggcaata gggcgggagg gagcgcgtcc caaggaaaca agcaccgcat aaatacttga
gttgggaacc cagtgcttcc ggaagctcgg agctcacctt cccgacctcg ccgaagttga
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cgggacgctg ctccgggaga cgcccactgg agggatcgca gagcccggca agctgcgagc
gcgccaaaga ccctgcgctt cggacgagga gcccaagtcc tccgagacgg ggagggagcg
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cggtggccgt gctgggcaac agcagcgtac tgctggctct gcaccggacg ccgcgcaaga
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tgtgccgcgt ggtgaagcac ctgcaggtgt tcggcatgtt tgcgtcggcc tacatgctgg
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cgccgcagta cttcgtcttc tccatgatcg aggtgaacaa tgtcaccaag gcccgcgact
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gcatctttgt ggcgcccgtg gtcatcttgg gtacctgcta cggcttcatc tgctacaaca
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gtgtggcctt ccaaaagggg ttcctgctcg caccctgtgt cagcagcgtg aagtccattt
cccgggccaa gatccgcacg gtgaagatga cttttgtgat cgtgacggct tacatcgtct
gctgggcgcc tttcttcatc atccagatgt ggtctgtctg ggatcccatg tccgtctgga
ccgaatcgga aaaccctacc atcaccatca ctgcattact gggttccttg aatagctgct
gtaatccctg gatatacatg tttttagtg gccatctcct tcaagactgt gttcaaagct
tcccatgctg ccaaaacatg aaggaaaaat tcaacaaaga agatactgac agtatgagca
gaagacagac tttttattct aacaatcgaa gcccaacaaa cagtacgggt atgtggaagg
actcgcctaa atcttccaag tccatcaaat tcattcctgt ttcaacttga gccttgcatt
catgcaactt gattcttgtg attgactttt tggctcatta gctgaattga gctagaaatc
acaagaacaa atacacttta ttaatataac cataaatcaa ttcattgtgt atgagactgt
gtttctagtt gcattttcat attgctacca aaaactagac attattttgt atggaatatt
aatggaaaca tgctgtacta aaatatgcag gtctgattcc cagaaataca acagaagtta
tatttttaaa ggaaaaatca taaccaccct agctttatat tttgttgtta gtttctttta
ttttcatttc taacataagt aagacttgat tggtttaaaa gtcacataaa atgcggcact

				atttctgaac aaagagagct catcatcagt cttaatattc agagaaaact tcagagaaat tatgttttca tccattaaaa ttaatttgtg catcagaaaa tgcagcctta aacagtgtcc aggagatggg atggtacctc ctaggagtac aagtgcctgg ggtgtaatga gctcctgctc attgtggcca gtttagagtt ctattagaag ctatcaatca ccttgcattt caaaatggta actttacaac tggcagtggc ctccttttgg ttcctcacat attattggtc aagaaaagca tgaaaactga gatgctgaag gtgagaggaa atgttgactg gccaaaaata tctttttttcc cccactgcaa ggttgtttta aagtcagatt tgtataagga aagccaaatt ttattaaaag agtagaaaag gattgcttaa ggtactctgg actttctctt ggacattgta aacgtatttt gatcagtatt acaagggtat cctgtgctat gctggacatt aacaagatca ttatcttcat gtttggggaa ttc		
334	5117	Vasopressin V1A Receptor	NP_000697.1	MRLSAGPDAG PSGNSSPWWP LATGAGNTSR EAEALGEGNG PPRDVRNEEL AKLEIAVLAV TFAVAVLGNS SVLLALHRTP RKTSRMHLFI RHLSLADLAV AFFQVLPQMC WDITYRFRGP DWLCRVVKHL QVFGMFASAY MLVVMTADRY IAVCHPLKTL QQPARRSRLM IAAAWVLSFV LSTPQYFVFS MIEVNNVTKA RDCWATFIQP WGSRAYVTWM TGGIFVAPVV ILGTCYGFIC YNIWCNVRGK TASRQSKGAE QAGVAFQKGF LLAPCVSSVK SISRAKIRTV KMTFVIVTAY IVCWAPFFII QMWSVWDPMS VWTESENPTI TITALLGSLN SCCNPWIYMF FSGHLLQDCV QSFPCCQNMK EKFNKEDTDS MSRRQTFYSN NRSPTNSTGM WKDSPKSSKS IKFIPVST	P	Homo sapiens
335	5118	Vasopressin V1B Receptor	NM_000707	ctccagccgc tgctcaccag gcagagcgag cgggcttggc tggggcttcc tgccctgagc gcgacaccga ctgctccgga ccgcgcctcc aagcaggctg aagggcttcc gctcttggct tccagaaaag tttggagaaa gagaatttga ggcggattgg agggtggtag cccctcccca gccttctttc tctcccagaa gcctcactct gcacagcgtc ccccattctt cccgtcctga ttccccatct tcctgacccc tccttctccc tctcctgggt cgatcccagt cacattttct ccttccgaat ctcatcctcc ctcctcctct ctatcccagt cctctgaacg atttccgcct atttggaagc cttctccctg tcattctcaa cgcttctcct ttctctccac ctcccctgcc actccatttt atccatcaaa cctctccact tggatccaca ccctcccttc atccttccct cccagcaaac cttgctcatg gattctgggc ctctgtggga tgccaacccc acccctcggg gcaccctctc tgccccccaat gccacaacac cctggctggg ccgggatgag gagctggcca aggtggagat cggagtcctg gccactgtcc tggtgctggc gaccgggggc aacctggctg tgctgctgac cctgggccag ctgggccgca agcgctcccg catgcacctg ttcgtgctgc acttagccct gacagacctg gccgtggcgc tcttccaggt gctgccacag ctgctgtggg acatcaccta ccgcttccag ggccccgacc tcctgtgcag ggccgtcaag tacctgcagg tgctcagcat gtttgcctcc acctacatgc tgctggccat gacgctggac cgctacctgg ctgtctgtca ccccctgcgc agcctccagc agccaggcca gtccacctac ctgctcatcg ctgctccctg gctgctggcc gccatcttca gcctccctca agtcttcatt ttttccctgc gggaggtgat ccagggctca ggggtgctgg actgctgggc agacttcggc ttcccttggg ggccacgggc ctacctcacc tggaccaccc tggctatctt cgttctgccg gtgaccatgc tcacggcctg ctacagcctc atctgccatg agatctgtaa aaacctaaaa gtcaagacac aggcctggcg ggtgggagga gggggctgga ggacttggga caggccctca ccttccacct tagctgccac cactcggggg ctgccatctc gggtcagcag catcaacacc atctcacggg ccaagatccg aacagtgaag atgacctttg tcatcgtgct ggcctacatc gcttgctggg ctcccttctt cagtgtccag atgtggtccg tgtgggacaa gaatgcccct gatgaagatt	A	Homo sapiens

				ccaccaatgt ggctttcacc atctctatgc ttttgggcaa cctcaacagc tgctgcaacc cctggatcta catgggcttc aacagccacc tgttaccgcg gcccctgcgt caccttgcct gctgtggggg tccccagccc aggatgcgcc ggcggctctc cgacggcagc ctctcgagcc gccacaccac gctgctgacc cgctccagct gcccggccac cctcagcctc agcctcagcc taaccctcag tgggaggccc aggcctgaag agtcaccaag ggacttggag ctggcagatg gggaaggcac cgctgagacc atcatctttt aggaaagact cgctggggtc tggtactgcc cccaggacta gtggaggttc tctgcccacc tcaggcactg gaaatgagag ctgggagggt aagggttgga gttagaggag gccctgtctg aagcagagcc aaaaggccag aatgggtccc ctaccctggt gtcacagctg cccctagtgt gaggctgcc tcataagctc ccaatctcag acactggcag tcagggagaa tcaaactgcc tgtctccctg gtcctgccat attcataggg tgtccatgca cacatggtgt cccagatcta ggcaggccta ggatggtgct gtctaggggt ccacgggtgg caggaattca gaggctggcc ttgtgccctg gctacctgtc tccattctaa cctgactggc acatctcagc ctaaccagga gaggggagaa gtgaaaaacc gtgaggagga ctctatttgg atcctggatt tgttgttgtt gttgttgttg ttgttagaga gaa		
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344 5520 Brain-Specific Angiogenesis Inhibitor 2 NP_001694.1 P Homo sapiens

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				RTAVKNFMAS ELDDNAGLSR SETGSTISMS SLERRKSRYS DLDFEKVMHT RKRHMELFQE		
				LNQKFQTLDR FRDIPNTSSM ENPAPNKNPW DTFKNPSEYP HYTTINVLDT EAKDALELRP		
				AEWEKCLNLP LDVQEGDFQT EV		
347	6031	SIV/HIV Receptor BONZO	NM_006564	gcagaccttg cttcatgagc aagctcatct ctggaacaaa ctggcaaagc atctctgctg	A	Homo sapiens
				gtgttcatca gaacagacac catggcagag catgattacc atgaagacta tgggttcagc		
				agtttcaatg acagcagcca ggaggagcat caagacttcc tgcagttcag caaggtcttt		
				ctgccctgca tgtacctggt ggtgtttgtc tgtggtctgg tggggaactc tctggtgctg		
				gtcatatcca tcttctacca taagttgcag agcctgacgg atgtgttcct ggtgaaccta		
				cccctggctg acctggtgtt tgtctgcact ctgcccttct gggcctatgc aggcatccat		
				gaatgggtgt ttggccaggt catgtgcaag agcctactgg gcatctacac tattaacttc		
				tacacgtcca tgctcatcct cacctgcatc actgtggatc gtttcattgt agtggttaag		
				gccaccaagg cctacaacca gcaagccaag aggatgacct ggggcaaggt caccagcttg		
				ctcatctggg tgatatccct gctggtttcc ttgccccaaa ttatctatgg caatgtcttt		

				aatctcgaca agctcatatg tggttaccat gacgaggcaa tttccactgt ggttcttgcc acccagatga cactggggtt cttcttgcca ctgctcacca tgattgtctg ctattcagtc ataatcaaaa cactgcttca tgctggaggc ttccagaagc acagatctct aaagatcatc ttcctggtga tggctgtgtt cctgctgacc cagatgccct tcaacctcat gaagttcatc cgcagcacac actgggaata ctatgccatg accagctttc actacaccat catggtgaca gaggccatcg catacctgag ggcctgcctt aaccctgtgc tctatgcctt tgtcagcctg aagtttcgaa agaacttctg gaaacttgtg aaggacattg gttgcctccc ttaccttggg gtctcacatc aatggaaatc ttctgaggac aattccaaga ctttttctgc ctcccacaat gtggaggcca ccagcatgtt ccagttatag gccttgccag ggtttcgaga agctgctctg gaatttgcaa gtcatggctg tgccctcttg atgtggtgag gcaggctttg tttatagctt gcgcattctc atggagaagt tatcagacac tctggctggt ttggaatgct tcttctcagg catgaacatg tactgttctc ttcttgaaca ctcatgctga aagcccaagt agggggtcta aaatttttaa ggactttcct tcctccatct ccaagaatgc tgaaaccaag gggggatgaca tgtgactcct atgatctcag gttctccttg attgggactg gggctgaagg ttgaagaggt gagcacggcc aacaaagctg ttgatggtag gtggcacact gggtgcccaa gctcagaagg ctcttctgac tactgggcaa agagtgtaga tcagagcagc agtgaaaaca agtgctggca ccaccaggca cctcacagaa atgagatcag gctctgcctc accttggggc ttgacttttg tataggtaga tgttcagatt gctttgatta atccagaata actagcacca gggactatga atgggcaaaa ctgaattata agaggctgat aattccagtg gtccatggaa tgcttgaaaa atgtgcaaaa cagcgtttaa gactgtaatg aatctaagca gcatttctga agtggactct ttggtggctt tgcattttaa aaatgaaatt ttccaatgtc tgccacacaa acgtatgtaa atgtatatac ccacacacat acacacatat gtcatatatt actagcatat gagtttcata gctaagaaat aaaactgtta aagtctccaa act		
348	6031	SIV/HIV Receptor BONZO	NP_006555.1	MAEHDYHEDY GFSSFNDSSQ EEHQDFLQFS KVFLPCMYLV VFVCGLVGNS LVLVISIFYH KLQSLTDVFL VNLPLADLVF VCTLPFWAYA GIHEWVFGQV MCKSLLGIYT INFYTSMLIL TCITVDRFIV VVKATKAYNQ QAKRMTWGKV TSLLIWVISL LVSLPQIIYG NVFNLDKLIC GYHDEAISTV VLATQMTLGF FLPLLTMIVC YSVIIKTLLH AGGFQKHRSL KIIFLVMAVF LLTQMPFNLM KFIRSTHWEY YAMTSFHYTI MVTEAIAYLR ACLNPVLYAF VSLKFRKNFW KLVKDIGCLP YLGVSHQWKS SEDNSKTFSA SHNVEATSMF QL	P	Homo sapiens
349	6204	Lysophosphatidic Acid Receptor Edg4	NM_004720	gcccagatgg tcatcatggg ccagtgctac tacaacgaga ccatcggctt cttctataac aacagtggca aagagctcag ctcccactgg cggcccaagg atgtggtcgt ggtggcactg gggctgaccg tcagcgtgct ggtgctgctg accaatctgc tggtcatagc agccatcgcc tccaaccgcc gcttccacca gcccatctac tacctgctcg gcaatctggc cgcggctgac ctcttcgcgg gcgtggccta cctcttcctc atgttccaca ctggtccccg cacagcccga ctttcacttg agggctggtt cctgcggcag ggcttgctgg acacaagcct cactgcgtcg gtggccacac tgctggccat cgccgtggag cggcaccgca gtgtgatggc cgtgcagctg cacagccgcc tgccccgtgg ccgcgtggtc atgctcattg tgggcgtgtg ggtggctgcc ctgggcctgg ggctgctgcc tgcccactcc tggcactgcc tctgtgccct ggaccgctgc tcacgcatgg caccccctgct cagccgctcc tatttggccg tctgggctct gtcgagcctg cttgtcttcc tgctcatggt ggctgtgtac acccgcattt tcttctacgt gcggcggcga gtgcagcgca tggcagagca tgtcagctgc cacccccgct accgagagac cacgctcagc	A	Homo sapiens

				ctggtcaaga ctgttgtcat catcctgggg gcgttcgtgg tctgctggac accaggccag gtggtactgc tcctggatgg tttaggctgt gagtcctgca atgtcctggc tgtagaaaag tacttcctac tgttggccga ggccaactca ctggtcaatg ctgctgtgta ctcttgccga gatgctgaga tgcgccgcac cttccgccgc cttctctgct gcgcgtgcct ccgccagtcc acccgcgagt ctgtccacta tacatcctct gcccagggag gtgccagcac tcgcatcatg cttcccgaga acggccaccc actgatggac tccacccttt agctaccttg aacttcagcg gtacgcggca agcaacaaat ccacagcccc tgatgacttg tgggtgctcc tggctcaacc caaccaacag gactgactg		
350	6204	Lysophosphatidic Acid Receptor Edg4	NP_004711.2	MVIMGQCYYN ETIGFFYNNS GKELSSHWRP KDVVVVALGL TVSVLVLLTN LLVIAAIASN RRFHQPIYYL LGNLAAADLF AGVAYLFLMF HTGPRTARLS LEGWFLRQGL LDTSLTASVA TLLAIAVERH RSVMAVQLHS RLPRGRVVML IVGVWVAALG LGLLPAHSWH CLCALDRCSR MAPLLSRSYL AVWALSSLLV FLLMVAVYTR IFFYVRRRVQ RMAEHVSCHP RYRETTLSLV KTVVIILGAF VVCWTPGQVV LLLDGLGCES CNVLAVEKYF LLLAEANSLV NAAVYSCRDA EMRRTFRRLL CCACLRQSTR ESVHYTSSAQ GGASTRIMLP ENGHPLMDST L	P	Homo sapiens
351	6213	C-C Chemokine Receptor 5	NM_000579	cttcagatag attatatctg gagtgaagga tcctgccacc tacgtatctg gcatagtatt ctgtgtagtg ggatgagcag agaacaaaaa caaaataatc cagtgagaaa agcccgtaaa taaaccttca gaccagagat ctattctcca gcttatttta agctcaactt aaaaagaaga actgttctct gattcttttc gccttcaata cacttaatga tttaactcca ccctccttca aaagaaacag catttcctac ttttatactg tctatatgat tgatttgcac agctcatctg gccagaagag ctgagacatc cgttccccta caagaaactc tccccgggtg gaacaagatg gattatcaag tgtcaagtcc aatctatgac atcaattatt atacatcgga gccctgccaa aaaatcaatg tgaagcaaat cgcagcccgc ctcctgcctc cgctctactc actggtgttc atctttggtt ttgtgggcaa catgctggtc atcctcatcc tgataaactg caaaaggctg aagagcatga ctgacatcta cctgctcaac ctggccatct ctgacctgtt tttccttctt actgtcccct tctgggctca ctatgctgcc gcccagtggg actttggaaa tacaatgtgt caactcttga cagggctcta ttttataggc ttcttctctg gaatcttctt catcatcctc ctgacaatcg ataggtacct ggctgtcgtc catgctgtgt ttgctttaaa agccaggacg gtcacctttg gggtggtgac aagtgtgatc acttgggtgg tggctgtgtt tgcgtctctc ccaggaatca tctttaccag atctcaaaaa gaaggtcttc attacacctg cagctctcat tttccataca gtcagtatca attctggaag aatttccaga cattaaagat agtcatcttg gggctggtcc tgccgctgct tgtcatggtc atctgctact cgggaatcct aaaaactctg cttcggtgtc gaaatgagaa gaagaggcac agggctgtga ggcttatctt caccatcatg attgtttatt ttctcttctg ggctccctac aacattgtcc ttctcctgaa caccttccag gaattctttg gcctgaataa ttgcagtagc tctaacaggt tggaccaagc tatgcaggtg acagagactc ttgggatgac gcactgctgc atcaacccca tcatctatgc ctttgtcggg gagaagttca gaaactacct cttagtcttc ttccaaaagc acattgccaa acgcttctgc aaatgctgtt ctattttcca gcaagaggct cccgagcgag caagctcagt ttacacccga tccactgggg agcaggaaat atctgtgggc ttgtgacacg gactcaagtg ggctggtgac ccagtcagag ttgtgcacat ggcttagttt tcatacacag cctgggctgg gggtggggtg ggagaggtct ttttttaaaag gaagttactg ttatagaggg tctaagattc atccatttat ttggcatctg tttaaagtag attagatctt ttaagcccat caattataga aagccaaatc	A	Homo sapiens

				aaaatatgtt gatgaaaaat agcaaccttt ttatctcccc ttcacatgca tcaagttatt gacaaactct cccttcactc cgaaagttcc ttatgtatat ttaaaagaaa gcctcagaga attgctgatt cttgagttta gtgatctgaa cagaaatacc aaaattattt cagaaatgta caacttttta cctagtacaa ggcaacatat aggttgtaaa tgtgtttaaa acaggtcttt gtcttgctat ggggagaaaa gacatgaata tgattagtaa agaaatgaca cttttcatgt gtgatttccc ctccaaggta tggttaataa gtttcactga cttagaacca ggcgagagac ttgtggcctg ggagagctgg ggaagcttct taaatgagaa ggaatttgag ttggatcatc tattgctggc aaagacagaa gcctcactgc aagcactgca tgggcaagct tggctgtaga aggagacaga gctggttggg aagacatggg gaggaaggac aaggctagat catgaagaac cttgacggca ttgctccgtc taagtcatga gctgagcagg gagatcctgg ttggtgttgc agaaggttta ctctgtggcc aaaggagggt caggaaggat gagcatttag ggcaaggaga ccaccaacag ccctcaggtc agggtgagga tggcctctgc taagctcaag gcgtgaggat gggaaggagg gaggtattcg taaggatggg aaggagggag gtattcgtgc agcatatgag gatgcagagt cagcagaact ggggtggatt tggtttggaa gtgagggtca gagaggagtc agagagaatc cctagtcttc aagcagattg gagaaaccct tgaaaagaca tcaagcacag aaggaggagg aggaggttta ggtcaagaag aagatggatt ggtgtaaaag gatgggtctg gtttgcagag cttgaacaca gtctcaccca gactccaggc tgtctttcac tgaatgcttc tgacttcata gatttccttc ccatcccagc tgaaatactg aggggtctcc aggaggagac tagatttatg aatacacgag gtatgaggtc taggaacata cttcagctca cacatgagat ctaggtgagg attgattacc tagtagtcat ttcatgggtt gttgggagga ttctatgagg caaccacagg cagcatttag cacatactac acattcaata agcatcaaac tcttagttac tcattcaggg atagcactga gcaaagcatt gagcaaaggg gtcccatata ggtgagggaa gcctgaaaaa ctaagatgct gcctgcccag tgcacacaag tgtaggtatc attttctgca tttaaccgtc aataggcaaa ggggggaagg gacatattca tttggaaata agctgccttg agccttaaaa cccacaaaag tacaatttac cagcctccgt atttcagact gaatgggggt ggggggggcg ccttaggtac ttattccaga tgccttctcc agacaaacca gaagcaacag aaaaaatcgt ctctccctcc ctttgaaatg aatatacccc ttagtgtttg ggtatattca tttcaaaggg agagagagag gttttttttct gttctttctc atatgattgt gcacatactt gagactgttt tgaatttggg ggatggctaa aaccatcata gtacaggtaa ggtgagggaa tagtaagtgg tgagaactac tcagggaatg aaggtgtcag aataataaga ggtgctactg actttctcag cctctgaata tgaacggtga gcattgtggc tgtcagcagg aagcaacgaa gggaaatgtc tttccttttg ctcttaagtt gtggagagtg caacagtagc ataggaccct accctctggg ccaagtcaaa gacattctga catcttagta tttgcatatt cttatgtatg tgaaagttac aaattgcttg aaagaaaata tgcatctaat aaaaaacacc ttcta		
352	6213	C-C Chemokine Receptor 5	NP_000570.1	MDYQVSSPIY DINYYTSEPC QKINVKQIAA RLLPPLYSLV FIFGFVGNML VILILINCKR LKSMTDIYLL NLAISDLFFL LTVPFWAHYA AAQWDFGNTM CQLLTGLYFI GFFSGIFFII LLTIDRYLAV VHAVFALKAR TVTFGVVTSV ITWVVAVFAS LPGIIFTRSQ KEGLHYTCSS HFPYSQYQFW KNFQTLKIVI LGLVLPLLVM VICYSGILKT LLRCRNEKKR HRAVRLIFTI MIVYFLFWAP YNIVLLLNTF QEFFGLNNCS SSNRLDQAMQ VTETLGMTHC CINPIIYAFV GEKFRNYLLV FFQKHIAKRF CKCCSIFQQE APERASSVYT RSTGEQEISV GL	P	Homo sapiens

353	6363	Chemokine (C-C motif) Receptor-like 2 (CCRL2)	NM_003965	tcctgctctg gggaagtggg cacacgttaa aagaaatgtt tatttcagtc ttctgaaata gggaattact ctggctaaaa tgtagctcca gaaagggaaa gtggggctgt atgaatccag gtccagtttg ttgtttcctc caggataagg cagctgtcgg aggggaaaat catctcccat ttctccacag ggcagtctga agatggccaa ttacacgctg gcaccagagg atgaatatga tgtcctcata gaaggtgaac tggagagcga tgaggcagag caatgtgaca agtatgacgc ccaggcactc tcagcccagc tggtgccatc actctgctct gctgtgtttg tgatcggtgt cctggacaat ctcctggttg tgcttatcct ggtaaaatat aaaggactca aacgcgtgga aaatatctat cttctaaact tggcagtttc taacttgtgt ttcttgctta ccctgccctt ctgggctcat gctgggggcg atcccatgtg taaaattctc attggactgt acttcgtggg cctgtacagt gagacatttt tcaattgcct tctgactgtg caaaggtacc tagtgttttt gcacaagggc aactttttct cagccaggag gagggtgccc tgtggcatca ttacaagtgt cctggcatgg gtaacagcca ttctggccac tttgcctgaa tacgtggttt ataaacctca gatggaagac cagaaataca agtgtgcatt tagcagaact cccttcctgc cagctgatga gacattctgg aagcattttc tgactttaaa aatgaacatt tcggttcttg tcctcccct atttattttt acatttctct atgtgcaaat gagaaaaaca ctaaggttca gggagcagag gtatagcctt ttcaagcttg tttttgccat aatggtagtc ttccttctga tgtgggcgcc ctacaatatt gcatttttcc tgtccacttt caaagaacac ttctccctga gtgactgcaa gagcagctac aatctggaca aaagtgttca catcactaaa ctcatcgcca ccacccactg ctgcatcaac cctctcctgt atgcgtttct tgatgggaca tttagcaaat acctctgccg ctgtttccat ctgcgtagta acaccccact tcaacccagg gggcagtctg cacaaggcac atcgagggaa gaacctgacc attccaccga agtgtaaact agcatccacc aaatgcaaga agaataaaca tggattttca tctttctgca ttatttcatg taaattttct acacatttgt atacaaaatc ggatacagga agaaaaggga gaggtgagct aacatttgct aagcactgaa tttgtctcag gcaccgtgca aggctcttta caaacgtgag ctccttcgcc tcctaccact tgtccatagt gtggatagga ctagtctcat ttctctgaga agaaaactaa ggcgcggaaa tttgtctaag atcacataac taggaagtgg cagaactgat tctccagccc tggtagcatt tgctcagagc ctacgcttgg tccagaacat caaactccaa accctgggga caaacgacat gaaataaatg tattttaaaa catct	A	Homo sapiens
354	6363	Chemokine (C-C motif) Receptor-like 2 (CCRL2)	NP_003956.1	MANYTLAPED EYDVLIEGEL ESDEAEQCDK YDAQALSAQL VPSLCSAVFV IGVLDNLLVV LILVKYKGLK RVENIYLLNL AVSNLCFLLT LPFWAHAGGD PMCKILIGLY FVGLYSETFF NCLLTVQRYL VFLHKGNFFS ARRRVPCGII TSVLAWVTAI LATLPEYVVY KPQMEDQKYK CAFSRTPFLP ADETFWKHFL TLKMNISVLV LPLFIFTFLY VQMRKTLRFR EQRYSLFKLV FAIMVVFLLM WAPYNIAFFL STFKEHFSLS DCKSSYNLDK SVHITKLIAT THCCINPLLY AFLDGTFSKY LCRCFHLRSN TPLQPRGQSA QGTSREEPDH STEV	P	Homo sapiens
355	6446	Pael Receptor (GPR37)	NM_005302	atgcgagccc cggcgcgct tctcgcccgc atgtcgcggc tactgcttct gctactgctc aaggtgtctg cctcttctgc cctcggggtc gcccctgcgt ccagaaacga aacttgtctg ggggagagct gtgcacctac agtgatccag cgccgcggca gggacgcctg gggaccggga aattctgcaa gagacgttct gcgagcccga gcacccaggg aggagcaggg ggcagcgttt cttgcgggac cctcctggga cctgccggcg gccccgggcc gtgacccggc tgcaggcaga ggggcggagg cgtcggcagc cggacccccg ggacctccaa ccaggccacc tggcccctgg aggtggaaag gtgctcgggg tcaggagcct tctgaaactt tggggagagg gaaccccacg	A	Homo sapiens

				gccctccagc tcttccttca gatctcagag gaggaagaga agggtcccag aggcgctggc atttccgggc gtagccagga gcagagtgtg aagacagtcc ccggagccag cgatcttttt tactggccaa ggagagccgg gaaactccag ggttcccacc acaagcccct gtccaagacg gccaatggac tggcggggca cgaagggtgg acaattgcac tcccgggccg ggcgctggcc cagaatggat ccttgggtga aggaatccat gagcctgggg gtccccgccg gggaaacagc acgaaccggc gtgtgagact gaagaacccc ttctacccgc tgacccagga gtcctatgga gcctacgcgg tcatgtgtct gtccgtggtg atcttcggga ccggcatcat tggcaacctg gcggtgatgt gcatcgtgtg ccacaactac tacatgcgga gcatctccaa ctccctcttg gccaacctgg ccttctggga ctttctcatc atcttcttct gccttccgct ggtcatcttc cacgagctga ccaagaagtg gctgctggag gacttctcct gcaagatcgt gccctatata gaggtcgctt ctctgggagt caccaccttc accttatgtg ctctgtgcat agaccgcttc cgtgctgcca ccaacgtaca gatgtactac gaaatgatcg aaaactgttc ctcaacaact gccaaacttg ctgttatatg ggtgggagct ctattgttag cacttccaga agttgttctc cgccagctga gcaaggagga tttggggttt agtggccgag ctccggcaga aaggtgcatt attaagatct ctcctgattt accagacacc atctatgttc tagccctcac ctacgacagt gcgagactgt ggtggtattt tggctgttac ttttgtttgc ccacgctttt caccatcacc tgctctctag tgactgcgag gaaaatccgc aaagcagaga aagcctgtac ccgagggaat aaacggcaga ttcaactaga gagtcagatg aactgtacag tagtggcact gaccatttta tatggatttt gcattattcc tgaaaatatc tgcaacattg ttactgccta catggctaca ggggtttcac agcagacaat ggacctcctt aatatcatca gccagttcct tttgttcttt aagtcctgtg tcaccccagt cctccttttc tgtctctgca aacccttcag tcgggccttc atggagtgct gctgctgttg ctgtgaggaa tgcattcaga agtcttcaac ggtgaccagt gatgacaatg acaacgagta caccacggaa ctcgaactct cgcctttcag taccatacgc cgtgaaatgt ccacttttgc ttctgtcgga actcattgct ga		
356	6446	Pael Receptor (GPR37)	NP_005293.1	MRAPGALLAR MSRLLLLLLL KVSASSALGV APASRNETCL GESCAPTVIQ RRGRDAWGPG NSARDVLRAR APREEQGAAF LAGPSWDLPA APGRDPAAGR GAEASAAGPP GPPTRPPGPW RWKGARGQEP SETLGRGNPT ALQLFLQISE EEEKGPRGAG ISGRSQEQSV KTVPGASDLF YWPRRAGKLQ GSHHKPLSKT ANGLAGHEGW TIALPGRALA QNGSLGEGIH EPGGPRRGNS TNRRVRLKNP FYPLTQESYG AYAVMCLSVV IFGTGIIGNL AVMCIVCHNY YMRSISNSLL ANLAFWDFLI IFFCLPLVIF HELTKKWLLE DFSCKIVPYI EVASLGVTTF TLCALCIDRF RAATNVQMYY EMIENCSSTT AKLAVIWVGA LLLALPEVVL RQLSKEDLGF SGRAPAERCI IKISPDLPDT IYVLALTYDS ARLWWYFGCY FCLPTLFTIT CSLVTARKIR KAEKACTRGN KRQIQLESQM NCTVVALTIL YGFCIIPENI CNIVTAYMAT GVSQQTMDLL NIISQFLLFF KSCVTPVLLF CLCKPFSRAF MECCCCCCEE CIQKSSTVTS DDNDNEYTTE LELSPFSTIR REMSTFASVG THC	P	Homo sapiens
357	6536	Putative Neurotransmitter Receptor (PNR)	NM_003967	atgagagctg tcttcatcca aggtgctgaa gagcaccctg cggcattctg ctaccaggtg aatgggtctt gccccaggac agtacatact ctgggcatcc agttggtcat ctacctgacc tgtgcagcag gcatgctgat tatcgtgcta gggaatgtat ttgtggcatt tgctgtgtcc tacttcaaag cgcttcacac gcccaccaac ttcctgctgc tctccctggc cctggctgac atgtttctgg gtctgctggt gctgcccctc agcaccattc gctcagtgga gagctgctgg ttcttcgggg acttcctctg ccgcctgcac acctacctgg acaccctctt ctgcctcacc	A	Homo sapiens

				tccatcttcc atctctgttt catttccatt gaccgccact gtgccatctg tgacccctg ctctatccct ccaagttcac agtgagggtg gctctcaggt acatcctggc aggatggggg gtgcccgcag catacacttc gttattcctc tacacagatg tggtagagac aaggctcagc cagtggctgg aagagatgcc ttgtgtgggc agttgccagc tgctgctcaa taaattttgg ggctggttaa acttcccttt gttctttgtc cctgcctca ttatgatcag cttgtatgtg aagatctttg tggttgctac cagacaggct cagcagatta ccacattgag caaaagcctg gctggggctg ccaagcatga gagaaaagct gccaagaccc tgggcattgt tgtgggcata tacctcttgt gctggctgcc cttcaccata gacacgatgg tcgacagcct ccttcacttt atcacacccc cactggtctt tgacatcttt atctggtttg cttacttcaa ctcagcctgc aaccccatca tctatgtctt ttcctaccag tggtttcgga aggcactgaa actcacactg agccagaagg tcttctcacc gcagacacgc actgttgatt tgtaccaaga atga		
358	6536	Putative Neurotransmitter Receptor (PNR)	NP_003958.1	MRAVFIQGAE EHPAAFCYQV NGSCPRTVHT LGIQLVIYLT CAAGMLIIVL GNVFVAFAVS YFKALHTPTN FLLLSLALAD MFLGLLVLPL STIRSVESCW FFGDFLCRLH TYLDTLFCLT SIFHLCFISI DRHCAICDPL LYPSKFTVRV ALRYILAGWG VPAAYTSLFL YTDVVETRLS QWLEEMPCVG SCQLLLNKFW GWLNFPLFFV PCLIMISLYV KIFVVATRQA QQITTLSKSL AGAAKHERKA AKTLGIVVGI YLLCWLPFTI DTMVDSLLHF ITPPLVFDIF IWFAYFNSAC NPIIYVFSYQ WFRKALKLTL SQKVFSPQTR TVDLYQE	P	Homo sapiens
359	6777	G Protein-Coupled Receptor TM7SF1	NM_003272	cggcgcgatg cgcggagacc cccgcggggg cggcggcggc cgtgagcccc gatgaggccc gagcgtcccc ggccgcgcgg cagcgccccc ggcccgatgg agaccccgcc gtgggaccca gcccgcaacg actcgctgcc gcccacgctg accccggccg tgccccccta cgtgaagctt ggcctcaccg tcgtctacac cgtgttctac gcgctgctct tcgtgttcat ctacgtgcag ctctggctgg tgctgcgtta ccgccacaag cggctcagct accagagcgt cttcctcttt ctctgcctct tctgggcctc cctgcggacc gtcctcttct ccttctactt caaagacttc gtggcggcca attcgctcag cccctttcgtc ttctggctgc tctactgctt ccctgtgtgc ctgcagtttt tcaccctcac gctgatgaac ttgtacttca cgcaggtgat tttcaaagcc aagtcaaaat attctccaga attactcaaa taccggttgc cctctacct ggcctccctc ttcatcagcc ttgttttcct gttggtgaat ttaacctgtg ctgtgctggt aaagacggga aattgggaga ggaaggttat cgtctctgtg cgagtggcca ttaatgacac gctcttcgtg ctgtgtgccg tctctctctc catctgtctc tacaaaatct ctaagatgtc cttagccaac atttacttgg agtccaaggg ctcctccgtg tgtcaagtga ctgccatcgg tgtcaccgtg atactgcttt acacctctcg ggcctgctac aacctgttca tcctgtcatt ttctcagaac aagagcgtcc attcctttga ttatgactgg tacaatgtat cagaccaggc agatttgaag aatcagctgg gagatgctgg atacgtatta tttggagtgg tgttatttgt ttgggaactc ttacctacca ccttagtcgt ttatttcttc cgagttagaa atcctacaaa ggaccttacc aaccctggaa tggtccccag ccatggattc agtcccagat cttatttctt tgacaacccct cgaagatatg acagtgatga tgaccttgcc tggaacattg cccctcaggg acttcaggga ggttttgctc cagattacta tgattgggga caacaaacta acagcttcct ggcacaagca ggaactttgc aagactcaac tttggatcct gacaaaccaa gccttgggta gcatcagtta acagttttat ggacgattcc tcagatgaaa agcttcagaa aagcatagtg acagctgaat ttttagggca cttttcctta agaaatagaa cttgattttt atttgttaca ggtttccaat ggccccatag gaataagcaa taatgtagac tgataaaccc ttattttagt actaaagagg	A	Homo sapiens

				gagccttgct atttcagtgg gtataattta aactttttaa agaaaatctg tacttttata aagatgtatt ttgtataact taaataataa tgctaaagta tactagggtt tttttttctt gagaatgtta ctgcaatcat gttgtagttt gcacagactt ttatgcataa ttcactttaa aaatatagaa tatatggtct aatagttttt taaagctttt ggactaaagt attccacaaa tcttacctct ttaggtcact gatggtcact ccgattctga gtgccacatt ggtagactcc taaaatacag ttgacaactt agccaattgc aactccagtg ttgataatta aaatgaaatg gtaaagcagc agactgtaag gtctttagag attttttttt aaggttcagg ccgtaggttc ctcaaggaat ctcttaagtt ttgcccaaag actggtactt cctttcagta gggcgctaat gtatacacat taatgataag ttgataacat taaaaatgta gctgacttat cctattaaac ctcctctgct atgttcac		
360	6777	G Protein-Coupled Receptor TM7SF1	NP_003263.1	MRPERPRPRG SAPGPMETPP WDPARNDSLP PTLTPAVPPY VKLGLTVVYT VFYALLFVFI YVQLWLVLRY RHKRLSYQSV FLFLCLFWAS LRTVLFSFYF KDFVAANSLS PFVFWLLYCF PVCLQFFTLT LMNLYFTQVI FKAKSKYSPE LLKYRLPLYL ASLFISLVFL LVNLTCAVLV KTGNWERKVI VSVRVAINDT LFVLCAVSLS ICLYKISKMS LANIYLESKG SSVCQVTAIG VTVILLYTSR ACYNLFILSF SQNKSVHSFD YDWYNVSDQA DLKNQLGDAG YVLFGVVLFV WELLPTTLVV YFFRVRNPTK DLTNPGMVPS HGFSPRSYFF DNPRRYDSDD DLAWNIAPQG LQGGFAPDYY DWGQQTNSFL AQAGTLQDST LDPDKPSLG	P	Homo sapiens
361	6853	Purinergic Receptor P2Y11	NM_002566	atggatcgag gtgccaagtc ctgccctgcc aacttcttgg cagctgccga cgacaaactc agtgggttcc agggggactt cctgtggccc atactggtgg ttgagttcct ggtggccgtg gccagcaatg gcctggccct gtaccgcttc agcatccgga agcagcgccc atggcacccc gccgtggtct tctctgtcca gctggcagtc agcgacctgc tctgcgctct gacgctgccc ccgctggccg cctacctcta tccccccaag cactggcgct atggggaggc cgcgtgccgc ctggagcgct tcctcttcac ctgcaacctg ctgggcagcg tcatcttcat cacctgcatc agcctcaacc gctacctggg catcgtgcac cccttcttcg cccgaagcca cctgcgaccc aagcacgcct gggccgtgag cgctgccggc tgggtcctgg ccgccctgct ggccatgccc acactcagct tctcccacct gaagaggccg cagcaggggg cgggcaactg cagcgtggcc aggcccgagg cctgcatcaa gtgtctgggg acagcagacc acgggctggc ggcctacaga gcgtatagcc tggtgctggc ggggttgggc tgcggcctgc cgctgctgct cacgctggca gcctacggcg ccctcgggcg ggccgtgcta cgcagcccag gcatgactgt ggccgagaag ctgcgtgtgg cagcgttggt ggccagtggt gtggccctct acgccagctc ctatgtgccc taccacatca tgcgggtgct caacgtggat gctcggcggc gctggagcac ccgctgcccg agctttgcag acatagccca ggccacagca gccctggagc tggggcccta cgtgggctac caggtgatgc ggggcctcat gcccctggcc ttctgtgtcc accctctact ctacatggcc gcagtgccca gcctgggctg ctgctgccga cactgccccg gctacaggga cagctggaac ccagaggacg ccaagagcac tggccaagcc ctgcccctca atgccacagc cgcccctaaa ccgtcagagc cccagtcccg tgagctgagc caatga	A	Homo sapiens
362	6853	Purinergic Receptor P2Y11	NP_002557.1	MDRGAKSCPA NFLAAADDKL SGFQGDFLWP ILVVEFLVAV ASNGLALYRF SIRKQRPWHP AVVFSVQLAV SDLLCALTLP PLAAYLYPPK HWRYGEAACR LERFLFTCNL LGSVIFITCI SLNRYLGIVH PFFARSHLRP KHAWAVSAAG WVLAALLAMP TLSFSHLKRP QQGAGNCSVA RPEACIKCLG TADHGLAAYR AYSLVLAGLG CGLPLLLTLA AYGALGRAVL RSPGMTVAEK LRVAALVASG VALYASSYVP YHIMRVLNVD ARRRWSTRCP SFADIAQATA ALELGPYVGY	P	Homo sapiens

				QVMRGLMPLA FCVHPLLYMA AVPSLGCCCR HCPGYRDSWN PEDAKSTGQA LPLNATAAPK PSEPQSRELS Q		
363	6921	G Protein-Coupled Receptor GPR39	NM_001508	atggcttcac ccagcctccc gggcagtgac tgctcccaaa tcattgatca cagtcatgtc cccgagtttg aggtggccac ctggatcaaa atcaccctta ttctggtgta cctgatcatc ttcgtgatgg gccttctggg gaacagcgcc accattcggg tcacccaggt gctgcagaag aaaggatact tgcagaagga ggtgacagac cacatggtga gtttggcttg ctcggacatc ttggtgttcc tcatcggcat gcccatggag ttctacagca tcatctggaa tcccctgacc acgtccagct acaccctgtc ctgcaagctg cacactttcc tcttcgaggc ctgcagctac gctacgctgc tgcacgtgct gacactcagc tttgagcgct acatcgccat ctgtcacccc ttcaggtaca aggctgtgtc gggaccttgc caggtgaagc tgctgattgg cttcgtctgg gtcacctccg ccctggtggc actgcccttg ctgtttgcca tgggtactga gtacccctg gtgaacgtgc ccagccaccg gggtctcact tgcaaccgct ccagcacccg ccaccacgag cagcccgaga cctccaatat gtccatctgt accaacctct ccagccgctg gaccgtgttc cagtccagca tcttcggcgc cttcgtggtc tacctcgtgg tcctgctctc cgtagccttc atgtgctgga acatgatgca ggtgctcatg aaaagccaga agggctcgct ggccgggggc acgcggcctc cgcagctgag gaagtccgag agcgaagaga gcaggaccgc caggaggcag accatcatct tcctgaggct gattgttgtg acattggccg tatgctggat gcccaaccag attcggagga tcatggctgc ggccaaaccc aagcacgact ggacgaggtc ctacttccgg gcgtacatga tcctcctccc cttctcggag acgtttttct acctcagctc ggtcatcaac ccgctcctgt acacggtgtc ctcgcagcag tttcggcggg tgttcgtgca ggtgctgtgc tgccgcctgt cgctgcagca cgccaaccac gagaagcgcc tgcgcgtaca tgcgcactcc accaccgaca gcgcccgctt tgtgcagcgc ccgttgctct tcgcgtcccg gcgccagtcc tctgcaagga gaactgagaa gatttctta agcacttttc agagcgaggc cgagccccag tctaagtccc agtcattgag tctcgagtca ctagagccca actcaggcgc gaaaccagcc aattctgctg cagagaatgg ttttcaggag catgaagttt ga	A	Homo sapiens
364	6921	G Protein-Coupled Receptor GPR39	NP_001499.1	MASPSLPGSD CSQIIDHSHV PEFEVATWIK ITLILVYLII FVMGLLGNSA TIRVTQVLQK KGYLQKEVTD HMVSLACSDI LVFLIGMPME FYSIIWNPLT TSSYTLSCKL HTFLFEACSY ATLLHVLTLS FERYIAICHP FRYKAVSGPC QVKLLIGFVW VTSALVALPL LFAMGTEYPL VNVPSHRGLT CNRSSTRHHE QPETSNMSIC TNLSSRWTVF QSSIFGAFVV YLVVLLSVAF MCWNMMQVLM KSQKGSLAGG TRPPQLRKSE SEESRTARRQ TIIFLRLIVV TLAVCWMPNQ IRRIMAAAKP KHDWTRSYFR AYMILLPFSE TFFYLSSVIN PLLYTVSSQQ FRRVFVQVLC CRLSLQHANH EKRLRVHAHS TTDSARFVQR PLLFASRRQS SARRTEKIFL STFQSEAEPQ SKSQSLSLES LEPNSGAKPA NSAAENGFQE HEV	P	Homo sapiens
365	7221	Galanin Receptor GalR2	NM_003857	ggacaggtgc cccgggagct tcccgctcgc gaagacccag acggctgcag gagcccgggc agcctcgggg tcagcggcac catgaacgtc tcgggctgcc caggggccgg gaacgcgagc caggcgggcg gcgggggagg ctggcacccc gaggcggtca tcgtgcccct gctcttcgcg ctcatcttcc tcgtgggcac cgtgggcaac acgctggtgc tggcggtgct gctgcgcggc ggccaggcgg tcagcactac caacctgttc atccttaacc tgggcgtggc cgacctgtgt ttcatcctgt gctgcgtgcc cttccaggcc accatctaca ccctggacgg ctgggtgttc ggctcgctgc tgtgcaaggc ggtgcacttc ctcatcttcc tcaccatgca cgccagcagc ttcacgctgg ccgccgtctc cctggacagg tatctggcca tccgctaccc gctgcactcc	A	Homo sapiens

				cgcgagctgc gcacgcctcg aaacgcgctg gcagccatcg ggctcatctg ggggctgtcg ctgctcttct ccgggcccta cctgagctac taccgccagt cgcagctggc caacctgacc gtgtgccatc ccgcgtggag cgcccctcgc cgccgcgcca tggacatctg caccttcgtc ttcagctacc tgcttcctgt gctggttctc ggcctgacct acgcgcgcac cttgcgctac ctctggcgcg ccgtcgaccc ggtggccgcg ggctcgggtg cccggcgcgc caagcgcaag gtgacacgca tgatcctcat cgtggccgcg ctcttctgcc tctgctggat gccccaccac gcgctcatcc tctgcgtgtg gttcggccag ttcccgctca cgcgcgccac ttatgcgctt cgcatcctct cgcacctggt ctcctacgcc aactcctgcg tcaaccccat cgtttacgcg ctggtctcca agcacttccg caaaggcttc cgcacgatct gcgcgggcct gctgggccgt gccccaggcc gagcctcggg ccgtgtgtgc gctgccgcgc ggggcaccca cagtggcagc gtgttggagc gcgagtccag cgacctgttg cacatgagcg aggcggcggg ggcccttcgt ccctgccccg gcgcttccca gccatgcatc ctcgagccct gtcctggccc gtcctggcag ggcccaaagg caggcgacag catcctgacg gttgatgtgg cctgaaagca cttagcgggc gcgctgggat gtcacagagt tggagtcatt gttgggggac cgtgggccg		
366	7221	Galanin Receptor GalR2	NP_003848.1	MNVSGCPGAG NASQAGGGGG WHPEAVIVPL LFALIFLVGT VGNTLVLAVL LRGGQAVSTT NLFILNLGVA DLCFILCCVP FQATIYTLDG WVFGSLLCKA VHFLIFLTMH ASSFTLAAVS LDRYLAIRYP LHSRELRTPR NALAAIGLIW GLSLLFSGPY LSYYRQSQLA NLTVCHPAWS APRRRAMDIC TFVFSYLLPV LVLGLTYART LRYLWRAVDP VAAGSGARRA KRKVTRMILI VAALFCLCWM PHHALILCVW FGQFPLTRAT YALRILSHLV SYANSCVNPI VYALVSKHFR KGFRTICAGL LGRAPGRASG RVCAAARGTH SGSVLERESS DLLHMSEAAG ALRPCPGASQ PCILEPCPGP SWQGPKAGDS ILTVDVA	P	Homo sapiens
367	7246	Orexin Receptor 1	NM_001525	cctcccttca ggaagtttga ggctgagacc cgaaaagacc tgggtgcaag cctccaggca ccctgaaggg agtgggctga gggctggccc aagctccctc ctctccctct gtagagccta ggatgcccct ctgctgcagc ggctcctgag ctcatggagc cctcagccac cccaggggcc cagatggggg tccccccctgg cagcagagag ccgtcccctg tgcctccaga ctatgaagat gagtttctcc gctatctgtg gcgtgattat ctgtacccaa aacagtatga gtgggtcctc atcgcagcct atgtggctgt gttcgtcgtg gccctggtgg gcaacacgct ggtctgcctg gccgtgtggc ggaaccacca catgaggaca gtcaccaact acttcattgt caacctgtcc ctggctgacg ttctggtgac tgctatctgc ctgccggcca gcctgctggt ggacatcact gagtcctggc tgttcggcca tgccctctgc aaggtcatcc cctatctaca ggctgtgtcc gtgtcagtgg cagtgctaac tctcagcttc atcgccctgg accgctggta tgccatctgc cacccactat tgttcaagag cacagcccgg cgggcccgtg gctccatcct gggcatctgg gctgtgtcgc tggccatcat ggtgccccag gctgcagtca tggaatgcag cagtgtgctg cctgagctag ccaaccgcac acggctcttc tcagtctgtg atgaacgctg ggcagatgac ctctatccca agatctacca cagttgcttc tttattgtca cctacctggc cccactgggc ctcatggcca tggcctattt ccagatattc cgcaagctct ggggccgcca gatccccggc accacctcag cactggtgcg gaactggaag cgcccctcag accagctggg ggacctggag cagggcctga gtggagagcc ccagccccgg ggccgcgcct tcctggctga agtgaagcag atgcgtgcac ggaggaagac agccaagatg ctgatggtgg tgctgctggt cttcgccctc tgctacctgc ccatcagcgt cctcaatgtc cttaagaggg tgttcgggat gttccgccaa gccagtgacc gcgaagctgt ctacgcctgc ttcaccttct cccactggct ggtgtacgcc	A	Homo sapiens

				aacagcgctg ccaaccccat catctacaac ttcctcagtg gcaaattccg ggagcagttt aaggctgcct tctcctgctg cctgcctggc ctgggtccct gcggctctct gaaggcccct agtccccgct cctctgccag ccacaagtcc ttgtccttgc agagccgatg ctccatctcc aaaatctctg agcatgtggt gctcaccagc gtcaccacag tgctgccctg agcgagggct gccctggagg ctccggctcg ggggatctgc cctacccct catggaaaga cagctggatg tggtgaaagg ctgtggcttc agtcctgggt ttctgcctgt gtgactctgg ataagtcact tcct		
368	7246	Orexin Receptor 1	NP_001516.1	MEPSATPGAQ MGVPPGSREP SPVPPDYEDE FLRYLWRDYL YPKQYEWVLI AAYVAVFVVA LVGNTLVCLA VWRNHHMRTV TNYFIVNLSL ADVLVTAICL PASLLVDITE SWLFGHALCK VIPYLQAVSV SVAVLTLSFI ALDRWYAICH PLLFKSTARR ARGSILGIWA VSLAIMVPQA AVMECSSVLP ELANRTRLFS VCDERWADDL YPKIYHSCFF IVTYLAPLGL MAMAYFQIFR KLWGRQIPGT TSALVRNWKR PSDQLGDLEQ GLSGEPQPRG RAFLAEVKQM RARRKTAKML MVVLLVFALC YLPISVLNVL KRVFGMFRQA SDREAVYACF TFSHWLVYAN SAANPIIYNF LSGKFREQFK AAFSCCLPGL GPCGSLKAPS PRSSASHKSL SLQSRCSISK ISEHVVLTSV TTVLP	P	Homo sapiens
369	7247	Orexin Receptor 2	NM_001526	ggggggggg taattgagct tcagctgagc cggacgtagc tttctcctcc tggtgtcatt gctgcagcct ccagtgccgg gtccctagtt cctcagctgc ctatcttccc ggtgcaacat cgcctgtaaa gacagcaaag ccaccgcaga agttgcccgg cagaagactc cggaggcatt ggctcagtaa cttttcacgt cattttctgc tcgggagccc cttctagcct ctccgcgcag cctttcccac cgcaaatcac cagtgctcat ggggcaggcg gagaggagct tgcagcattg agcggaaccg gacttgagcc cgtgatgtcc ggcaccaaat tggaggactc cccccttgt cgcaactggt catctgcttc ggagctgaat gaaactcaag agcccttttt aaaccccacc gactatgacg acgaggaatt cctgcggtac ctgtggaggg aatacctgca cccgaaagaa tatgagtggg tcctgatcgc cgggtacatc atcgtgttcg tcgtggctct cattgggaac gtcctggttt gtgtggcagt gtggaagaac caccacatga ggacggtaac caactacttc atagtcaatc tttctctggc tgatgtgctc gtgaccatca cctgccttcc agccacactg gtcgtggata tcactgagac ctggtttttt ggacagtccc tttgcaaagt gattccttat ctacagaccg tgtcggtgtc tgtgtctgtc ctcacactga gctgtatcgc cttggatcgg tggtatgcaa tctgtcaccc tttgatgttt aagagcacag caaagcgggc ccgtaacagc attgtcatca tctggattgt ctcctgcatt ataatgattc ctcaggccat cgtcatggag tgcagcaccg tgttcccagg cttagccaat aaaaccaccc tctttacggt gtgtgatgag cgctggggtg gtgaaattta tcccaagatg taccacatct gtttctttct ggtgacatac atggcaccac tgtgtctcat ggtgttggct tatctgcaaa tatttcgcaa actctggtgt cgacagatcc ctggaacatc atctgtagtt cagagaaaat ggaagcccct gcagcctgtt tcacagcctc gagggccagg acagccaacg aagtcccgga tgagcgctgt ggcggctgaa ataaagcaga tccgagccag aaggaaaaca gcccggatgt tgatggttgt gcttttggta tttgcaattt gctatctacc aattagcatc ctcaatgtgc taaagagagt atttgggatg tttgcccata ctgaagacag agagactgtg tatgcctggt ttacctttc acactggctt gtatatgcca atagtgctgc gaatccaatt atttataatt ttctcagtgg aaaatttcga gaggaattta aagctgcgtt ttcttgctgt tgccttggag ttcaccatcg ccaggaggat cggctcacca ggggacgaac tagcacagag agccggaagt ccttgaccac tcaaatcagc	A	Homo sapiens

				aactttgata acatatcaaa actttctgag caagttgtgc tcactagcat aagcacactc ccagcagcca atggagcagg accacttcaa aactggtaga atatttattc atatgacaag gatacctgag taaaactatc ctttttaaaa tcactgggaa cagaaatttt attatcctat gatgtgaagc taaaattact tgtggatctt tttttttttt aatctattgc tctttggaaa taaaaaaaaa gtcagtttaa aatgaaaaaa aaaaaaaaaa aaa		
370	7247	Orexin Receptor 2	NP_001517.1	MSGTKLEDSP PCRNWSSASE LNETQEPFLN PTDYDDEEFL RYLWREYLHP KEYEWVLIAG YIIVFVVALI GNVLVCVAVW KNHHMRTVTN YFIVNLSLAD VLVTITCLPA TLVVDITETW FFGQSLCKVI PYLQTVSVSV SVLTLSCIAL DRWYAICHPL MFKSTAKRAR NSIVIIWIVS CIIMIPQAIV MECSTVFPGL ANKTTLFTVC DERWGGEIYP KMYHICFFLV TYMAPLCLMV LAYLQIFRKL WCRQIPGTSS VVQRKWKPLQ PVSQPRGPGQ PTKSRMSAVA AEIKQIRARR KTARMLMVVL LVFAICYLPI SILNVLKRVF GMFAHTEDRE TVYAWFTFSH WLVYANSAAN PIIYNFLSGK FREEFKAAFS CCCLGVHHRQ EDRLTRGRTS TESRKSLTTQ ISNFDNISKL SEQVVLTSIS TLPAANGAGP LQNW	P	Homo sapiens
371	8436	Platelet-Activating Factor Receptor	NM_000952	ccagctgata ttccagccca cagcaatgga gccacatgac tcctcccaca tggactctga gttccgatac actctcttcc cgattgttta cagcatcatc tttgtgctcg ggtcattgc taatggctac gtgctgtggg tctttgcccg cctgtaccct tgcaagaaat tcaatgagat aaagatcttc atggtgaacc tcaccatggc ggacatgctc ttcttgatca ccctgccact ttggattgtc tactaccaaa accagggcaa ctggatactc cccaaattcc tgtgcaacgt ggctggctgc cttttcttca tcaacaccta ctgctctgtg gccttcctgg gcgtcatcac ttataaccgc ttccaggcag taactcggcc catcaagact gctcaggcca acacccgcaa gcgtggcatc tctttgtcct tggtcatctg ggtggccatt gtgggagctg catcctactt cctcatcctg gactctacca acacagtgcc cgacagtgct ggctcaggca acgtcactcg ctgctttgag cattacgaga agggcagcgt gccagtcctc atcatccaca tcttcatcgt gttcagcttc ttcctggtct tcctcatcat cctcttctgc aacctggtca tcatccgtac cttgctcatg cagccggtgc agcagcagcg caacgctgaa gtcaagcgcc gggcgctgtg gatggtgtgc acggtcttgg cggtgttcat catctgcttc gtgccccacc acgtggtgca gctgccctgg acccttgctg agctgggctt ccaggacagc aaattccacc aggccattaa tgatgcacat caggtcaccc tctgcctcct tagcaccaac tgtgtcttag accctgttat ctactgtttc ctcaccaaga agttccgcaa gcacctcacc gaaaagttct acagcatgcg cagtagccgg aaatgctccc gggccaccac ggatacggtc actgaagtgg ttgtgccatt caaccagatc cctggcaatt ccctcaaaaa ttagtccttg cttc	A	Homo sapiens
372	8436	Platelet-Activating Factor Receptor	NP_000943.1	MEPHDSSHMD SEFRYTLFPI VYSIIFVLGV IANGYVLWVF ARLYPCKKFN EIKIFMVNLT MADMLFLITL PLWIVYYQNQ GNWILPKFLC NVAGCLFFIN TYCSVAFLGV ITYNRFQAVT RPIKTAQANT RKRGISLSLV IWVAIVGAAS YFLILDSTNT VPDSAGSGNV TRCFEHYEKG SVPVLIIHIF IVFSFFLVFL IILFCNLVII RTLLMQPVQQ QRNAEVKRRA LWMVCTVLAV FIICFVPHHV VQLPWTLAEL GFQDSKFHQA INDAHQVTLC LLSTNCVLDP VIYCFLTKKF RKHLTEKFYS MRSSRKCSRA TTDTVTEVVV PFNQIPGNSL KN	P	Homo sapiens
373	8509	G Protein-Coupled Receptor Ls8509	NM_007223	tgggggcgtc ctccttcgtc cccgcccggc tgtcaagctg tgttctagcg gccgagggac cgaggggggc taagaaaggg ggcgcccagc catgcagagg caaaaaggcg ctgcggaacg gggtccccgt cgccagtgct gaggcaggag gtcggagcca caagtgaggg gctgggaagc aggacccagc acgggcgtct tggcaggcgg ccgggcgcag ggccaggctg ctggggacgc	A	Homo sapiens

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374	8509	G Protein-Coupled Receptor Ls8509	NP_009154.1	MGHNGSWISP NASEPHNASG AEAAGVNRSA LGEFGEAQLY RQFTTTVQVV IFIGSLLGNF MVLWSTCRTT VFKSVTNRFI KNLACSGICA SLVCVPFDII LSTSPHCCWW IYTMLFCKVV KFLHKVFCSV TILSFPAIAL DRYYSVLYPL ERKISDAKSR ELVMYIWAHA VVASVPVFAV TNVADIYATS TCTEVWSNSL GHLVYVLVYN ITTVIVPVVV VFLFLILIRR ALSASQKKKV IIAALRTPQN TISIPYASQR EAELHATLLS MVMVFILCSV PYATLVVYQT VLNVPDTSVF LLLTAVWLPK VSLLANPVLF LTVNKSVRKC LIGTLVQLHH RYSRRNVVST GSGMAEASLE PSIRSGSQLL EMFHIGQQQI FKPTEDEEES EAKYIGSADF QAKEIFSTCL EGEQGPQFAP SAPPLSTVDS VSQVAPAAPV EPETFPDKYS LQFGFGPFEL PPQWLSETRN SKKRLLPPLG NTPEELIQTK VPKVGRVERK MSRNNKVSIF PKVDS	P	Homo sapiens
375	8896	Neuropeptide Y Receptor Type 6 Pseudogene	NM_006173	ttgataggga tagaaacaca tttggctgct tctatagtta acaagatgct gttacattcc ttgcctcact agctctgaag actatactag cgggacaaag aaagcacctg agatgagctg agaggagggt aaaggtacac agagatcccc tggatatttg ttctatgtcc tctcaggggc tttgctacca ctagagaatt atccatatta agaacttgca ttgatattct gggttctgtt tcatttttta gggtctcaag agcacgctca agtcattcac atgtttccat caaatacaga cacagatcag ggaagattaa accctactaa tttctcgtcg gatgcctcac aacaaggtgc cttccaagaa ctaatggcca aaatatccac ccacaacaca aataagctta gaaaatctct tcttacaatc ctgacacaat ggaagtttcc ctaaaccacc cagcatctaa tacaaccagc acaaagaaca acaactcggc attttttac tttgagtcct gtcaacctcc ttctccagct ttactcctat tatgcatagc ctatactgtg gtcttaattg tgggcctttt tggaaacctc tctctcatca tcatcatctt taagaagcag agaaaagctc agaatttcac cagcatactg attgccaatc tctccctctc tgatacсttg gtgtgtgtca tgtgcatcca ttttactatc atctacactc tgatggacca ctggatattt ggggatacca tgtgcagact cacatcctat gtgcagagtg tctcaatctc tgtgtccata ttctcacttg tattcactgc tgtcgaaaga tatcagctaa ttgtgaaccc ccgtggctgg aagcccagtg tgactcatgc ctactggggc atcacactga tttggctgtt ttcccttctg ctgtctattc ccttcttcct gtcctaccac ctcactgatg agcccttccg caacctctct ctccccactg acctctacac ccaccaggtg gcctgtgtgg agaactggcc ctccaaaaag gaccggctgc tcttcaccac ctcccttttt ctgctgcagt attttgttcc tctaggcttc atcctcatct gctacttgaa gattgttatc tgcctccgca ggagaaatgc aaaggtagat aagaagaagg aaaatgaggg ccggctcaat gagaacaaga ggatcaacac aatgttgatt tccatcgtgg tgacctttgg agcctgctgg ctgccccgaa tatcttcaat gtcatctttg actggtatca tgaggtgctg atgagctgcc accacgacct ggtatttgta gtttgccact tggttgctat ggtttccaca tgtataaacc ctctctttta tggctttctc aacaaaaatt tccaaaagga cctggtagtg cttattcacc actgctggtg cttcacacct caggaaagat gtgaaaatat tgccatctcc actatgcaca cagactccaa gaggtcttta agattggctc gtataacaac aggtatatga aaattgataa tgctgaagct cttcttgaat gggagctgga caggtaatgg tgggaatagg gcaagatgca gaaagaagaa accagaacca aaaatagcaa ctttataccc acttttcctt taggctaaga ctgcctgtct catatgtcta tccaacacac cctccaacat acacgaacac acataccacc ccttttctct taagaaaata actctaataa ttcaaacaac ctgcccgcca tcatttgtgg	A	Homo sapiens

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376	8896	Neuropeptide Y Receptor Type 6 Pseudogene	NP_006164.1	mevslnhpas nttstknnns affyfescqp pspallllci aytvvlivgl fgnlsliiii fkkqrkaqnf tsilianlsl sdtlvcvmci hftiiytlmd hwifgdtmcr ltsyvqsvsi svsifslvft averyqlivn prgwkpsvth aywgitliwl fslllsipff lsyhltdepf rnlslptdly thqvacvenw pskkdrllft tslfllqyfv plgfilicyl kiviclrrrn akvdkkkene grlnenkrin tmlisivvtf gacwlpriss mssltgimrc	P	Homo sapiens
377	9421	Neuropeptide Y Receptor Type 1	nm_000909	cattcccacc cttccttctt taataagcag gagcgaaaaa gacaaattcc aaagaggatt gttcagttca agggaatgaa gaattcagaa taattttggt aaatggattc caatatcggg aataagaata agctgaacag ttgacctgct ttgaagaaac atactgtcca tttgtctaaa ataatctata acaaccaaac caatcaaaat gaattcaaca ttattttccc aggttgaaaa tcattcagtc cactctaatt tctcagagaa gaatgcccag cttctggctt ttgaaaatga tgattgtcat ctgcccttgg ccatgatatt taccttagct cttgcttatg gagctgtgat cattcttggt gtctctggaa acctggcctt gatcataatc atcttgaaac aaaaggagat gagaaatgtt accaacatcc tgattgtgaa cctttccttc tcagacttgc ttgttgccat catgtgtctc ccctttacat ttgtctacac attaatggac cactgggtct ttggtgaggc gatgtgtaag ttgaatcctt ttgtgcaatg tgtttcaatc actgtgtcca ttttctctct ggttctcatt gctgtggaac gacatcagct gataatcaac cctcgagggt ggagaccaaa taatagacat gcttatgtag gtattgctgt gatttgggtc cttgctgtgg cttcttcttt gcctttcctg atctaccaag taatgactga tgagccgttc caaaatgtaa cacttgatgc gtacaaagac aaatacgtgt gctttgatca atttccatcg gactctcata ggttgtctta taccactctc ctcttggtgc tgcagtattt tggtccactt tgttttatat ttatttgcta cttcaagata tatatacgcc taaaaaggag aaacaacatg atggacaaga tgagagacaa taagtacagg tccagtgaaa ccaaaagaat caatatcatg ctgctctcca ttgtggtagc atttgcagtc tgctggctcc ctcttaccat ctttaacact gtgtttgatt ggaatcatca gatcattgct acctgcaacc acaatctgtt attcctgctc tgccacctca cagcaatgat atccacttgt gtcaacccca tattttatgg gttcctgaac aaaaacttcc agagagactt gcagttcttc ttcaactttt gtgatttccg gtctcgggat gatgattatg aaacaatagc catgtccacg atgcacacag atgtttccaa aacttctttg aagcaagcaa gcccagtcgc atttaaaaaa atcaacaaca atgatgataa tgaaaaaatc tgaaactact tatagcctat ggtcccggat gacatctgtt taaaaacaag cacaacctgc aacatacttt gattacctgt tctcccaagg aatggggttg aaatcatttg aaaatgacta agattttctt gtcttgcttt ttactgcttt tgttgtagtt gtcataatta catttggaac aaaaggtgtg ggctttgggg tcttctggaa atagttttga ccagacatct ttgaagtgct tttgtgaat ttatgcatat aatataaaga cttttatact gtacttattg gaatgaaatt tctttaaagt attacgatgc gctgacttca gaagtacctg ccatccaata cggtcattag attgggtcat cttgattaga ttagattaga ttagattgtc aacagattgg gccatcctta ctttatgata ggcatcattt tagtgtgtta caatagtaac agtatgcaaa agcagcattc aggagccgaa agatagtctt gaagtcattc agaagtggtt tgaggtttct gtttttggt ggtttttgtt tgttttttt tttttcacc ttaagggagg ctttcatttc ctcccgactg attgtcactt aaatcaaaat	A	Homo sapiens

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378	9421	Neuropeptide Y Receptor Type 1	NP_000900.1	MNSTLFSQVE NHSVHSNFSE KNAQLLAFEN DDCHLPLAMI FTLALAYGAV IILGVSGNLA LIIIILKQKE MRNVTNILIV NLSFSDLLVA IMCLPFTFVY TLMDHWVFGE AMCKLNPFVQ CVSITVSIFS LVLIAVERHQ LIINPRGWRP NNRHAYVGIA VIWVLAVASS LPFLIYQVMT DEPFQNVTLD AYKDKYVCFD QFPSDSHRLS YTTLLLVLQY FGPLCFIFIC YFKIYIRLKR RNNMMDKMRD NKYRSSETKR INIMLLSIVV AFAVCWLPLT IFNTVFDWNH QIIATCNHNL LFLLCHLTAM ISTCVNPIFY GFLNKNFQRD LQFFFNFCDF RSRDDDYETI AMSTMHTDVS KTSLKQASPV AFKKINNNDD NEKI	P	Homo sapiens
379	9834	Corticotropin releasing factor Receptor 1	NM_004382	agccgagcga gcccgaggat gggagggcac ccgcagctcc gtctcgtcaa ggcccttctc cttctggggc tgaaccccgt ctctgcctcc ctccaggacc agcactgcga gagcctgtcc ctggccagca acatctcaga caatggctac cgggagtgcc tggccaatgg cagctgggcc gcccgcgtga attactccga gtgccaggag atcctcaatg aggagaaaaa aagcaaggtg cactaccatg tcgcagtcat catcaactac ctgggccact gtatctccct ggtggccctc ctggtggcct ttgtcctctt tctgcggctc aggagcatcc ggtgcctgcg aaacatcatc cactggaacc tcatctccgc cttcatcctg cgcaacgcca cctggttcgt ggtccagcta accatgagcc ccgaggtcca ccagagcaac gtgggctggt gcaggttggt gacagccgcc tacaactact tccatgtgac caacttcttc tggatgttcg gcgagggctg ctacctgcac acagccatcg tgctcaccta ctccactgac cggctgcgca aatggatgtt catctgcatt ggctggggtg tgcccttccc catcattgtg gcctgggcca ttgggaagct gtactacgac aatgagaagt gctggtttgg caaaaggcct ggggtgtaca ccgactacat ctaccagggc cccatgatcc tggtcctgct gatcaatttc atcttccttt tcaacatcgt ccgcatcctc atgaccaagc tccgggcatc caccacgtct gagaccattc agtacaggaa ggctgtgaaa gccactctgg tgctgctgcc cctcctgggc atcacctaca tgctgttctt cgtcaatccc ggggaggatg aggtctcccg ggtcgtcttc atctacttca actccttcct ggaatccttc cagggcttct ttgtgtctgt gttctactgt ttcctcaata gtgaggtccg ttctgccatc cggaagaggt ggcaccggtg gcaggacaag cactcgatcc gtgcccgagt ggcccgtgcc atgtccatcc ccacctcccc aacccgtgtc agctttcaca gcatcaagca gtccacagca gtctga	A	Homo sapiens

380	9834	Corticotropin releasing factor Receptor 1	NP_004373.1	MGGHPQLRLV KALLLLGLNP VSASLQDQHC ESLSLASNIS DNGYRECLAN GSWAARVNYS ECQEILNEEK KSKVHYHVAV IINYLGHCIS LVALLVAFVL FLRLRSIRCL RNIIHWNLIS AFILRNATWF VVQLTMSPEV HQSNVGWCRL VTAAYNYFHV TNFFWMFGEG CYLHTAIVLT YSTDRLRKWM FICIGWGVPF PIIVAWAIGK LYYDNEKCWF GKRPGVYTDY IYQGPMILVL LINFIFLFNI VRILMTKLRA STTSETIQYR KAVKATLVLL PLLGITYMLF FVNPGEDEVS RVVFIYFNSF LESFQGFFVS VFYCFLNSEV RSAIRKRWHR WQDKHSIRAR VARAMSIPTS PTRVSFHSIK QSTAV	P	Homo sapiens
381	10457	Frizzled-2	NM_001466	cgagtaaagt ttgcaaagag gcgcgggagg cggcagccgc agcgaggagg cggcggggaa gaagcgcagt ctccgggttg gggcgggggg cgggggggc gccaaggagc cgggtggggg gcggcggcca gcatgcggcc ccgcagcgcc ctgccccgcc tgctgctgcc gctgctgctg ctgcccgccg ccgggccggc ccagttccac ggggagaagg gcatctccat cccggaccac ggcttctgcc agcccatctc catcccgctg tgcacggaca tcgcctacaa ccagaccatc atgcccaacc ttctgggcca cacgaaccag gaggacgcag gcctagaggt gcaccagttc tatccgctgg tgaaggtgca gtgctcgccc gaactgcgct tcttcctgtg ctccatgtac gcacccgtgt gcaccgtgct ggaacaggcc atcccgccgt gccgctctat ctgtgagcgc gcgcgccagg gctgcgaagc cctcatgaac aagttcggtt ttcagtggcc cgagcgcctg cgctgcgagc acttcccgcg ccacggcgcc gagcagatct gcgtcggcca gaaccactcc gaggacggag ctcccgcgct actcaccacc gcgccgccgc cgggactgca gccgggtgcc gggggcaccc cgggtggccc gggcggcggc ggcgctcccc cgcgctacgc cacgctggag cacccccttcc actgcccgcg cgtcctcaag gtgccatcct atctcagcta caagtttctg ggcgagcgtg attgtgctgc gccctgcgaa cctgcgcggc ccgatggttc catgttcttc tcacaggagg agacgcgttt cgcgcgcctc tggatcctca cctggtcggt gctgtgctgc gcttccacct tcttcactgt caccacgtac ttggtagaca tgcagcgctt ccgctaccca gagcggccta tcatttttct gtcgggctgc tacaccatgg tgtcggtggc ctacatcgcg ggcttcgtgc tccaggagcg cgtggtgtgc aacgagcgct tctccgagga cggttaccgc acggtggtgc agggcaccaa gaaggagggc tgcaccatcc tcttcatgat gctctacttc ttcagcatgg ccagctccat ctggtgggtc atcctgtcgc tcacctggtt cctggcagcc ggcatgaagt ggggccacga ggccatcgag gccaactctc agtacttcca cctggccgcc tgggccgtgc cggccgtcaa gaccatcacc atcctggcca tgggccagat cgacggcgac ctgctgagcg gcgtgtgctt cgtaggcctc aacagcctgg acccgctgcg gggcttcgtg ctagcgccgc tcttcgtgta cctgttcatc ggcacgtcct tcctcctggc cggcttcgtg tcgctcttcc gcatccgcac catcatgaag cacgacggca ccaagaccga aaagctggag cggctcatgg tgcgcatcgg cgtcttctcc gtgctctaca cagtgcccgc caccatcgtc atcgcttgct acttctacga gcaggccttc cgcgagcact gggagcgctc gtgggtgagc cagcactgca agagcctggc catcccgtgc ccggcgcact acacgccgcg catgtcgccc gacttcacgg tctacatgat caaatacctc atgacgctca tcgtgggcat cacgtcgggc ttctggatct ggtcgggcaa gacgctgcac tcgtggagga agttctacac tcgcctcacc aacagccgac acggtgagac caccgtgtga gggacgcccc caggccggaa ccgcgcggcg ctttcctccg cccggggtgg ggcccctaca gactccgtat tttatttttt taaataaaaa acgatcgaaa ccatttcact tttaggttgc tttttaaaag agaactctct gcccaacacc ccc	A	Homo sapiens

382	10457	Frizzled-2	NP_001457.1	MRPRSALPRL LLPLLLLPAA GPAQFHGEKG ISIPDHGFCQ PISIPLCTDI AYNQTIMPNL LGHTNQEDAG LEVHQFYPLV KVQCSPELRF FLCSMYAPVC TVLEQAIPPC RSICERARQG CEALMNKFGF QWPERLRCEH FPRHGAEQIC VGQNHSEDGA PALLTTAPPP GLQPGAGGTP GGPGGGGAPP RYATLEHPFH CPRVLKVPSY LSYKFLGERD CAAPCEPARP DGSMFFSQEE TRFARLWILT WSVLCCASTF FTVTTYLVDM QRFRYPERPI IFLSGCYTMV SVAYIAGFVL QERVVCNERF SEDGYRTVVQ GTKKEGCTIL FMMLYFFSMA SSIWWVILSL TWFLAAGMKW GHEAIEANSQ YFHLAAWAVP AVKTITILAM GQIDGDLLSG VCFVGLNSLD PLRGFVLAPL FVYLFIGTSF LLAGFVSLFR IRTIMKHDGT KTEKLERLMV RIGVFSVLYT VPATIVIACY FYEQAFREHW ERSWVSQHCK SLAIPCPAHY TPRMSPDFTV YMIKYLMTLI VGITSGFWIW SGKTLHSWRK FYTRLTNSRH GETTV	P	Homo sapiens
383	11968	Putative Leukocyte Platelet-Activating Factor Receptor (HUMNPIIY20)	NM_022571	atggccttac tgggcagcca gcactccggc gccccctccg cggccggccc acctggcggg acttcctcag cggccacggc ggccgtgctc tccttcagca ccgtggcgac cgcggcgctg gggaacctga gcgacgcaag cggaggcggc acagctgccg ctcccggtgg cggcggcctt ggcgggtccg gggcagcgcg ggaggcgggg gcggcggtga ggcggccgct aggcccggag gcggcgccgc tgctgtcgca cggagctgca gtggcggccc aggcgctcgt cctcctgctc atcttcctgc tgtctagcct tggcaactgc gcggtgatgg gggtgattgt gaagcaccgg cagctccgca ccgtcaccaa cgccttcatc ctgtcgctgt ccctatcgga tctgctcacg gcgctgctct gcctgcccgc cgccttcctg gacctcttca ctccgcccgg gggttcggcg cctgcgctgc ccgcggggcc ctggcgcggc ttctgccggc caagccgctt cttcagctcg tgcttcggca tcgtgtacgc tcagcgtggc gctcatctcg ttggaccgtt actgcgctat cgtcggccgc cgcgggagaa gatcggccgc cgccgcgcgc tgcagctgct ggcgggcgcc tggctgacgg ccctgggctt ctccttgccc tgggagctgc tcggggcgcc ccgggaactc gcggcgggcc agagcttcca cggctgcctc taccggacct ccccggaccc cgcgcagctg ggcggcccct tcagcgtggg gctggtggtg gcctgctacc tgctgccctt cctgctcatc tgcttctgcc actaccacat ctgcaagacg gtgcgcctgt cggacgtgcg cgtgcggccg gtgaacacct acgcgcgcgt gctgcgttct tcagcgaggt gcgcacggcc accaccgtcc tcatcatga	A	Homo sapiens
384	11968	Putative Leukocyte Platelet-Activating Factor Receptor (HUMNPIIY20)	NP_072093.1	MALLGSQHSG APSAAGPPGG TSSAATAAVL SFSTVATAAL GNLSDASGGG TAAAPGGGGL GGSGAAREAG AAVRRPLGPE AAPLLSHGAA VAAQALVLLL IFLLSSLGNC AVMGVIVKHR QLRTVTNAFI LSLSLSDLLT ALLCLPAAFL DLFTPPGGSA PALPAGPWRG FCRPSRFFSS CFGIVYAQRG AHLVGPLLRY RRPPREKIGR RRALQLLAGA WLTALGFSLP WELLGAPREL AAGQSFHGCL YRTSPDPAQL GGPFSVGLVV ACYLLPFLLI CFCHYHICKT VRLSDVRVRP VNTYARVLRS SARCARPPPS SS	P	Homo sapiens
385	14198	Interleukin-8 Receptor B	nm_001557	cattcagaga cagaaggtgg atagacaaat ctccaccttc agactggtag gctcctccag aagccatcag acaggaagat gtgaaaatcc ccagcactca tcccagaatc actaagtggc acctgtcctg ggccaaagtc ccaggacaga cctcattgtt cctctgtggg aatacctccc caggagggca tcctggattt ccccttgca acccaggtca gaagtttcat cgtcaaggtt gtttcatctt ttttttcctg tctaacagct ctgactacca cccaaccttg aggcacagtg aagacatcgg tggccactcc aataacagca ggtcacagct gctcttctgg aggtgtccta caggtgaaaa gcccagcgac ccagtcagga tttaagttta cctcaaaaat ggaagatttt	A	Homo sapiens

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386	14198	Interleukin-8 Receptor B	NP_001548.1	MEDFNMESDS FEDFWKGEDL SNYSYSSTLP PFLLDAAPCE PESLEINKYF VVIIYALVFL LSLLGNSLVM LVILYSRVGR SVTDVYLLNL ALADLLFALT LPIWAASKVN GWIFGTFLCK VVSLLKEVNF YSGILLLACI SVDRYLAIVH ATRTLTQKRY LVKFICLSIW GLSLLLALPV LLFRRTVYSS NVSPACYEDM GNNTANWRML LRILPQSFGF IVPLLIMLFC YGFTLRTLFK AHMGQKHRAM RVIFAVVLIF LLCWLPYNLV LLADTLMRTQ VIQETCERRN HIDRALDATE ILGILHSCLN PLIYAFIGQK FRHGLLKILA IHGLISKDSL PKDSRPSFVG SSSGHTSTTL	P	Homo sapiens
387	14641	Calcitonin Receptor	NM_001742	cagaattcca ggacaaagag atcttcaaaa atcaaaaatg aggttcacat ttacaagccg gtgcttggca ctgtttcttc ttctaaatca cccaacccca attcttcctg ccttttcaaa tcaaacctat ccaacaatag agcccaagcc atttctttac gtcgtaggac gaaagaagat gatggatgca cagtacaaat gctatgaccg aatgcagcag ttacccgcat accaaggaga aggtccatat tgcaatcgca cctgggatgg atggctgtgc tgggatgaca caccggctgg agtattgtcc tatcagttct gcccagatta ttttccggat tttgatccat cagaaaaggt tacaaaatac tgtgatgaaa aaggtgtttg gtttaaacat cctgaaaaca atcgaacctg gtccaactat actatgtgca atgctttcac tcctgagaaa ctgaagaatg catatgttct gtactatttg gctattgtgg gtcattcttt gtcaattttc accctagtga tttccctggg gattttcgtg tttttcagga gccttggctg ccaaagggta accctgcaca agaacatgtt tcttacttac attctgaatt ctatgattat catcatccac ctggttgaag tagtacccaa tggagagctc gtgcgaaggg acccggtgag ctgcaagatt ttgcattttt tccaccagta catgatggcc tgcaactatt tctggatgct ctgtgaaggg atctatcttc atacactcat tgtcgtggct gtgtttactg agaagcaacg cttgcggtgg tattatctct tgggctgggg gttcccgctg gtgccaacca ctatccatgc tattaccagg gccgtgtact tcaatgacaa ctgctggctg agtgtggaaa cccatttgct ttacataatc catggacctg tcatggcggc acttgtggtc aatttcttct ttttgctcaa cattgtccgg gtgcttgtga ccaaaatgag ggaaacccat gaggcggaat cccacatgta cctgaaggct gtgaaggcca ccatgatcct tgtgcccctg ctgggaatcc agtttgtcgt ctttccctgg agaccttcca acaagatgct tgggaagata tatgattacg tgatgcactc tctgattcat ttccagggct tctttgttgc gaccatctac tgcttctgca acaatgaggt ccaaaccacc gtgaagcgcc aatgggccca attcaaaatt cagtggaacc agcgttgggg gaggcgcccc tccaaccgct ctgctcgcgc tgcagccgct gctgcggagg ctggcgacat cccaatttac atctgccatc aggagctgag gaatgaacca gccaacaacc aaggcgagga gagtgctgag atcatccctt tgaatatcat agagcaagag tcatctgctt gaatgtgaag gcaaacacag catcgtgatc actgagccat catttcctgg gagaaagacc atgcatttaa agtattctcc atcctcccag gaaccgaaca tatcatttgt gaagaattat tcagtgaatt tgtccattgt aaatctgaag aaagttattc ttggtactgt tgctttggga gacagtctag gaatggagtc tcccactgca acttgtgaac tccatcattc atccaggact gagatgcaaa tgtcacagta atgcaagcaa agtatcaaag aaaaacaatg aaattgacct agttcagata cagggtgctc cttgtcaata ctgagccatt tatacctttg aaatattaaa atcactgtca atatttttat ttttaactct ggattttgaa ttagattatt tctgtatttg gctatggatc tgatttttaa ttttttaaa tttcagtcaa ttctgatgtt actgagatgt tttaccatcc ttacaatgta aaccacatga actacgtgac ctctgcaaga caaagcggct ttctaataga gagattagta aatatgtgaa gaaaaagacc tgcatttggc aggaagatgt atgctttgaa tgcaaaagaa atttagagtc aatttgctga	A	Homo sapiens

				aaacattaca tgctcagctt ggttttggac aagcctgtcc attgggcagg acctagctgt tgtaaagaat tggtcttaat gttgaatgta ttttggttgc tgatgtttat aaactgagag gtcacaaaga atctatcact aaaaattttt acaaaactgc caaaaatata attcttagtg gaagacaata ctccctttaa agagagtttg ccactcccct aaactccagg atttataaag caaattactc caaggtttat aaagcagatt acctcttgcc cttgggtgct atctagcagt aaaagataaa tttgttgaat attggtaatt aaaagactcc acataagtcc attaactgct ttccacccag cttcaaagct taaaaagagc tcaggctttt ccaggaagat ccaggagggc taattagaaa tcaacttgtg gttgaccgct tgtttcttgt tattaccaaa caggagggga aaaaattaac tgctccaaat ttaaccataa atcaattcat gtttaacgtt tctcattaaa atccagtatt atattatcat atctctcttt acttcccagt ataagatttt tgaaaatcct gaataaacca gtatcgttac tggcacctga aattaatttg tgaatttgca acagtaatca gagttaccat tatttaattt gtatgctaaa tgaggaggta cattgaaacc ctccaaatct ccagtctcat ctatgtcata ttttgccact gcctttcaga agtgatttag ttgtggaaag ataataaatt gatttgttat ggttacatat ttagcgcacc cagagaaaat taattatatt tctacagaga aaatgaattt gggatactaa agtagtttaa gtctccttta ctgaatgtaa gggggggatc gaaaagaagg tatttttcca atcacagtgt tatgtagtat tgttctattt ttgtttacaa acatggaaaa cagagtattt ctggcagctg tggtacaaat gtgataatat attgctaaaa tattttagat gttattatgc taatatagta ggggttgaag aaaacaaaat agcttattat agaattgcac atagttctgc ccaaattatg tgaaatgctt atgcttgtgt atatgtataa attaatacag agtacgttaa aagcaaaaag atgtatattt gcatattttt ctaaagaaat atattattca tcttttcatt c		
388	14641	Calcitonin Receptor	NP_001733.1	MRFTFTSRCL ALFLLLNHPT PILPAFSNQT YPTIEPKPFL YVVGRKKMMD AQYKCYDRMQ QLPAYQGEGP YCNRTWDGWL CWDDTPAGVL SYQFCPDYFP DFDPSEKVTK YCDEKGVWFK HPENNRTWSN YTMCNAFTPE KLKNAYVLYY LAIVGHSLSI FTLVISLGIF VFFRSLGCQR VTLHKNMFLT YILNSMIIII HLVEVVPNGE LVRRDPVSCK ILHFFHQYMM ACNYFWMLCE GIYLHTLIVV AVFTEKQRLR WYYLLGWGFP LVPTTIHAIT RAVYFNDNCW LSVETHLLYI IHGPVMAALV VNFFFLLNIV RVLVTKMRET HEAESHMYLK AVKATMILVP LLGIQFVVFP WRPSNKMLGK IYDYVMHSLI HFQGFFVATI YCFCNNEVQT TVKRQWAQFK IQWNQRWGRR PSNRSARAAA AAAEAGDIPI YICHQELRNE PANNQGEESA EIIPLNIIEQ ESSA	P	Homo sapiens
389	16041	C-C Chemokine Receptor 6	NM_004367	caaacgttcc caaatcttcc cagtcggctt gcagagactc cttgctccca ggagataacc agaagctgca tcttattgac agatggtcat cacattggtg agctggagtc atcagattgt ggggcccgga gtgaggctga agggagtgga tcagagcact gcctgagagt cacctctact ttcctgctac cgctgcctgt gagctgaagg ggctgaacca tacactcctt tttctacaac cagcttgcat tttttctgcc cacaatgagc ggggaatcaa tgaatttcag cgatgttttc gactccagtg aagattattt tgtgtcagtc aatacttcat attactcagt tgattctgag atgttactgt gctccttgca ggaggtcagg cagttctcca ggctatttgt accgattgcc tactccttga tctgtgtctt tggcctcctg gggaatattc tggtggtgat cacctttgct ttttataaga aggccaggtc tatgacagac gtctatctct tgaacatggc cattgcagac atcctctttg ttcttactct cccattctgg gcagtgagtc atgccactgg tgcgtgggtt ttcagcaatg ccacgtgcaa gttgctaaaa ggcatctatg ccatcaactt taactgcggg atgctgctcc tgacttgcat tagcatggac cggtacatcg ccattgtaca ggcgactaag	A	Homo sapiens

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390	16041	C-C Chemokine Receptor 6	NP_004358.1	MSGESMNFSD VFDSSEDYFV SVNTSYYSVD SEMLLCSLQE VRQFSRLFVP IAYSLICVFG LLGNILVVIT FAFYKKARSM TDVYLLNMAI ADILFVLTLP FWAVSHATGA WVFSNATCKL LKGIYAINFN CGMLLLTCIS MDRYIAIVQA TKSFRLRSRT LPRTKIICLV VWGLSVIISS STFVFNQKYN TQGSDVCEPK YQTVSEPIRW KLLMLGLELL FGFFIPLMFM IFCYTFIVKT LVQAQNSKRH KAIRVIIAVV LVFLACQIPH NMVLLVTAAN LGKMNRSCQS EKLIGYTKTV TEVLAFLHCC LNPVLYAFIG QKFRNYFLKI LKDLWCVRRK YKSSGFSCAG RYSENISRQT SETADNDNAS SFTM	P	Homo sapiens
391	16599	Smoothened	NM_005631	atggccgctg cccgcccagc gcgggggccg gagctcccgc tcctggggct gctgctgctg ctgctgctgg gggacccggg ccgggggcg gcctcgagcg ggaacgcgac cgggcctggg cctcggagcg cgggcgggag cgcgaggagg agcgcggcgg tgactggccc tccgccgccg ctgagccact gcggccgggc tgccccctgc gagccgctgc gctacaacgt gtgcctgggc tcggtgctgc cctacggggc cacctccaca ctgctggccg gagactcgga ctcccaggag gaagcgcacg gcaagctcgt gctctggtcg ggcctccgga atgccccccg ctgctgggca gtgatccagc ccctgctgtg tgccgtatac atgcccaagt gtgagaatga ccgggtggag ctgcccagcc gtaccctctg ccaggccacc cgaggcccct gtgccatcgt ggagagggag cggggctggc ctgacttcct gcgctgcact cctgaccgct tccctgaagg ctgcacgaat gaggtgcaga acatcaagtt caacagttca ggccagtgcg aagtgccctt ggttcggaca gacaacccca agagctggta cgaggacgtg gagggctgcg gcatccagtg ccagaacccg ctcttcacag aggctgagca ccaggacatg cacagctaca tcgcggcctt cggggccgtc acgggcctct gcacgctctt caccctggcc acattcgtgg ctgactggcg gaactcgaat cgctaccctg ctgttattct cttctacgtc aatgcgtgct tctttgtggg cagcattggc tggctggccc agttcatgga tggtgcccgc cgagagatcg tctgccgtgc agatggcacc atgaggcttg gggagcccac ctccaatgag actctgtcct gcgtcatcat ctttgtcatc gtgtactacg ccctgatggc tggtgtggtt tggtttgtgg tcctcaccta tgcctggcac acttccttca aagccctggg caccacctac cagcctctct cgggcaagac ctcctacttc cacctgctca cctggtcact cccctttgtc ctcactgtgg caatccttgc tgtggcgcag gtggatgggg actctgtgag tggcatttgt tttgtgggct acaagaacta ccgataccgt gcgggcttcg tgctggcccc aatcggcctg gtgctcatcg tgggaggcta cttcctcatc cgaggagtca tgactctgtt ctccatcaag agcaaccacc ccgggctgct gagtgagaag gctgccagca agatcaacga gaccatgctg cgcctgggca tttttggctt cctggccttt ggctttgtgc tcattacctt cagctgccac ttctacgact tcttcaacca ggctgagtgg	A	Homo sapiens

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394	17250	G Protein-Coupled Receptor GPR45	NP_009158.1	MACNSTSLEA YTYLLLNTSN ASDSGSTQLP APLRISLAIV MLLMTVVGFL GNTVVCIIVY QRPAMRSAIN LLLATLAFSD IMLSLCCMPF TAVTLITVRW HFGDHFCRLS ATLYWFFVLE GVAILLIISV DRFLIIVQRQ DKLNPRRAKV IIAVSWVLSF CIAGPSLTGW TLVEVPARAP QCVLGYTELP ADRAYVVTLV VAVFFAPFGV MLCAYMCILN TVRKNAVRVH NQSDSLDLRQ LTRAGLRRLQ RQQQVSVDLS FKTKAFTTIL ILFVGFSLCW LPHSVYSLLS VFSQRFYCGS SFYATSTCVL WFSYLKSVFN PIVYCWRIKK FREACIELLP QTFQILPKVP ERIRRRIQPS TVYVCNENQS AV	P	Homo sapiens
395	17345	G Protein-Coupled Receptor D6	NM_001296	ggtcttatga gctgctattg aacacggcag agcctgttgg tgacctgcac acaggagccc tccagtcagt actgattgaa ttactcaagg ctgcctctct gcaaagttga gcactacagg acgtcgggac tgggcatttc cttccaacat ggccgccact gcctctccgc agccactcgc cactgaggat gccgattctg agaatagcag cttctattac tatgactacc tggatgaagt ggccttcatg ctctgcagga aggatgcagt ggtgtccttt ggcaaagtct tcctcccagt cttctatagc ctgatttttg tgttgggcct cagcgggaac ctccttcttc tcatggtctt gctccgttac gtgcctcgca ggcggatggt tgagatctat ctgctgaatc tggccatctc caaccttctg tttctggtga cactgccctt ctggggcatc tccgtggcct ggcattgggt cttcgggagt ttcttgtgca agatggtgag cactctttat actattaact tttacagtgg catcttttc attagctgca tgagcctgga caagtacctg gagatcgttc atgctcagcc ctaccacagg ctgaggaccc gggccaagag cctgctcctt gctaccatag tatgggctgt gtccctggcc gtctccatcc ctgatatggt ctttgtacag acacatgaaa atcccaaggg tgtgtggaac tgccacgcag atttcggcgg gcatgggacc atttggaagc tcttcctccg	A	Homo sapiens

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396	17345	G Protein-Coupled Receptor D6	NP_001287.2	MAATASPQPL ATEDADSENS SFYYYDYLDE VAFMLCRKDA VVSFGKVFLP VFYSLIFVLG	P	Homo sapiens
				LSGNLLLLMV LLRYVPRRRM VEIYLLNLAI SNLLFLVTLP FWGISVAWHW VFGSFLCKMV		
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				VFVQTHENPK GVWNCHADFG GHGTIWKLFL RFQQNLLGFL LPLLAMIFFY SRIGCVLVRL		
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				GMNDLGERQS ENYPNKEDVG NKSA		
397	17535	Gaba(b) Receptor 1	NM_001470	cgctccccgc tcccgtggct gccgccgccc cggggaagaa gagacagggg tggggtttgg	A	Homo sapiens
				gggaagcgag agaggagggg agagaccctg gccaggctgg agcctggatt cgaggggagg		
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398	17535	Gaba(b) Receptor 1	NP_001461.1	MLLLLLLAPL FLRPPGAGGA QTPNATSEGC QIIHPPWEGG IRYRGLTRDQ VKAINFLPVD YEIEYVCRGE REVVGPKVRK CLANGSWTDM DTPSRCVRIC SKSYLTLENG KVFLTGGDLP ALDGARVDFR CDPDFHLVGS SRSICSQGQW STPKPHCQVN RTPHSERRAV YIGALFPMSG GWPGGQACQP AVEMALEDVN SRRDILPDYE LKLIHHDSKC DPGQATKYLY ELLYNDPIKI ILMPGCSSVS TLVAEAARMW NLIVLSYGSS SPALSNRQRF PTFFRTHPSA TLHNPTRVKL FEKWGWKKIA TIQQTTEVFT STLDDLEERV KEAGIEITFR QSFFSDPAVP VKNLKRQDAR IIVGLFYETE ARKVFCEVYK ERLFGKKYVW FLIGWYADNW FKIYDPSINC TVDEMTEAVE GHITTEIVML NPANTRSISN MTSQEFVEKL TKRLKRHPEE TGGFQEAPLA YDAIWALALA LNKTSGGGGR SGVRLEDFNY NNQTITDQIY RAMNSSSFEG VSGHVVFDAS GSRMAWTLIE QLQGGSYKKI GYYDSTKDDL SWSKTDKWIG GSPPADQTLV IKTFRFLSQK LFISVSVLSS LGIVLAVVCL SFNIYNSHVR YIQNSQPNLN NLTAVGCSLA LAAVFPLGLD GYHIGRNQFP FVCQARLWLL GLGFSLGYGS MFTKIWWVHT VFTKKEEKKE WRKTLEPWKL YATVGLLVGM DVLTLAIWQI VDPLHRTIET FAKEEPKEDI DVSILPQLEH CSSRKMNTWL GIFYGYKGLL LLLGIFLAYE TKSVSTEKIN DHRAVGMAIY NVAVLCLITA PVTMILSSQQ DAAFAFASLA IVFSSYITLV VLFVPKMRRL ITRGEWQSEA QDTMKTGSST NNNEEEKSRL LEKENRELEK IIAEKEERVS ELRHQLQSRQ QLRSRRHPPT PPEPSGGLPR GPPEPPDRLS CDGSRVHLLY K	P	Homo sapiens
399	17666	Glucagon-Like Peptide 1 Receptor	NM_002062	gaattccggg tttgtgcatc cactctggaa ccgctcgtgt gtggcctgtc ggaatgacat cgccctcatc agtctccgca cgcgttcccg aggtggcagc gatggcccag tcctgaactc cccgccatgg ccggcgcccc cggcccgctg cgccttgcgc tgctgctgct cgggatggtg ggcagggccg gcccccgccc ccagggtgcc actgtgtccc tctgggagac ggtgcagaaa tggcgagaat accgacgcca gtgccagcgc tccctgactg aggatccacc tcctgccaca gacttgttct gcaaccggac cttcgatgaa tacgcctgct ggccagatgg ggagccaggc tcgttcgtga atgtcagctg cccctggtac ctgccctggg ccagcagtgt gccgcagggc cacgtgtacc ggttctgcac agctgaaggc ctctggctgc agaaggacaa ctccagcctg ccctggaggg acttgtcgga gtgcgaggag tccaagcgag gggagagaag ctcccccggag gagcagctcc tgttcctcta catcatctac acggtgggct acgcactctc cttctctgct ctggttatcg cctctgcgat cctcctcggc ttcagacacc tgcactgcac caggaactac atccacctga acctgtttgc atccttcatc ctgcgagcat tgtccgtctt catcaaggac gcagccctga agtggatgta tagcacagcc gcccagcagc accagtggga tgggctcctc tcctacctgg actctctgag ctgccgcctg gtgtttctgc tcatgcagta ctgtgtggcg	A	Homo sapiens

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400	17666	Glucagon-Like Peptide 1 Receptor	NP_002053.1	MAGAPGPLRL ALLLLGMVGR AGPRPQGATV SLWETVQKWR EYRRQCQRSL TEDPPPATDL FCNRTFDEYA CWPDGEPGSF VNVSCPWYLP WASSVPQGHV YRFCTAEGLW LQKDNSSLPW RDLSECEESK RGERSSPEEQ LLFLYIIYTV GYALSFSALV IASAILLGFR HLHCTRNYIH LNLFASFILR ALSVFIKDAA LKWMYSTAAQ QHQWDGLLSY LDSLSCRLVF LLMQYCVAAN YYWLLVEGVY LYTLLAFSVL SEQWIFRLYV SIGWGVPLLF VVPWGIVKYL YEDEGCWTRN SNMNYWLIIR LPILFAIGVN FLIFVRVICI VVSKLKANLM CKTDIKCRLA KSTLTLIPLL GTHEVIFAFV MDEHARGTLR FIKLFTELSF TSFQGLMVAI LYCFVNNEVQ LEFRKSWERW RLEHLHIQRD SSMKPLKCPT SSLSSGATAG SSMYTATCQA SCS	P	Homo sapiens
401	18471	G Protein-Coupled Receptor LOC51210	NM_016372	gccttgcaca tggagatgct tagctgaggg ggtggctttg ttagactatt tgcaggtcgt gagatagagc ctgagatggg ggactgggcc cctgcctggg ggattgggtc gtgacctgtg tggagcccca cactgagctg cagtgggtgg ggagggtggt ttacaggggt gctctgtgca gcccctctga ttttcccctg ggagtcccag gtccagggga aggaggacag tggcccaggc cacacagctc actgggcggc tctcactccc ccagggctgg ctgctggcgg gatggacacc ctggaggagg tgacttgggc caatgggagc acagcgctac ccccacccct ggcaccaaac atcagtgtgc ctcatcgctg cctgctgctg ctctacgaag acattggcac ctccagggtc cggtactggg acctcttgct gctcatcccc aatgtgctct tcctcatctt cctgctctgg aagcttccat ctgctcgggc gaagatccgc atcacctcca gccccatttt tatcaccttc tacatcctgg tgtttgtggt ggcgctggtg ggcattgccc gggccgtggt atccatgacg gtgagcacct cgaacgctgc aactgttgct gataagatcc tgtgggagat cacccgcttc ttcctgctgg ccatcgagct gagtgtgatc atcctgggcc tggcctttgg cacctgggag agtaagtcca gcatcaagcg ggtgctggcc atcaccacag tgctgtccct ggcctactct gtcacccagg ggaccctgga gatcctgtac cctgatgccc atctctcagc tgaggacttt aatatctatg gccatggggg ccgccagttc tggctggtca gctcctgctt cttcttcctg gtctactctc tggtggtcat ccttcccaag accccgctga aggagcgcat ctccctgcct tctcggagga gcttctacgt gtatgcgggc atcctggcac tgctcaacct actgcagggg ctggggagtg tgctgctgtg cttcgacatc atcgaggggc tctgctgtgt agatgccaca accttcctgt acttcagctt cttcgctccg ctcatctacg tggctttcct ccggggcttc ttcggctcgg agcccaagat cctcttctcc tacaaatgcc aagtggacga gacagaggag	A	Homo sapiens

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402	18471	G Protein-Coupled Receptor LOC51210	NP_057456.1	MDTLEEVTWA NGSTALPPPL APNISVPHRC LLLLYEDIGT SRVRYWDLLL LIPNVLFLIF LLWKLPSARA KIRITSSPIF ITFYILVFVV ALVGIARAVV SMTVSTSNAA TVADKILWEI TRFFLLAIEL SVIILGLAFG TWESKSSIKR VLAITTVLSL AYSVTQGTLE ILYPDAHLSA EDFNIYGHGG RQFWLVSSCF FFLVYSLVVI LPKTPLKERI SLPSRRSFYV YAGILALLNL LQGLGSVLLC FDIIEGLCCV DATTFLYFSF FAPLIYVAFL RGFFGSEPKI LFSYKCQVDE TEEPDVHLPQ PYAVARREGL EAAGAAGASA ASYSSTQFDS AGGVAYLDDI ASMPCHTGSI NSTDSERWKA INA	P	Homo sapiens
403	19072	G Protein-Coupled Receptor Ls19072	LG100650	agtgatgagc ggcggctgcc tggcagtgca gtgggctggc tggtatgtgg gggcctctcc ctgctggcca atgcctgggg catcctcagc gttggcgcca agcagaagaa gtggaagccc ttggagttcc tgctgtgtac actcgcggcc acccacatgc taaatgtggc cgtgcccatc gccacctact ccgtggtgca gctgcggcgg cagcgccccg acttcgagtg gaatgagggt ctctgcaagg tcttcgtgtc caccttctac accctcaccc tggccacctg tttctctgtc acctccctct cctaccaccg catgtggatg gtctgctggc ctgtcaacta ccggtgagca tgtgaagttc tggggttctt ggggttctaa gcaggcgtga aaacaaagac atatctggtg tgcccatgcg cacacaggag tggccacacc tgtggcatgc tgggagggca ggcaggctca ggaggggctg ctgtaagctg ctgggggcat acacgtagct ttgcatgggt agacacaagc agccaataca gaatgcttgg aagagggacg tgtgacaatg ttcacagtat ctcctatgca aggaacaagg ccctgccaca ctggctgtgc catgactatg atatactggg ggtgtggggt gcctgggtgg tgcggatccc ctacaggtcc ccagaggcct ggggaggccc tgtgggtgac gccagatccc tctgttccac cctgcctcat gccaggctga gcaatgccaa gaagcaggcg gtgcacacag tcatgggtat ctggatggtg tccttcatcc tgtcggccct gcctgccgtt ggctggcacg acaccagcga gcgcttctac acccatggct gccgcttcat cgtggctgag atcggcctgg gctttggcgt ctgcttcctg ctgctggtgg gcggcagcgt ggccatgggc gtgatctgca cagccatcgc cctcttccag acgctggccg tgcaggtggg gcgccaggcc gaccgccgcg ccttcaccgt gcccaccatc gtggtggagg acgcgcaggg caagcggcgc tcctccatcg atggctcgga gcccgccaaa acctctctgc agaccacggg cctcgtgacc accatagtct tcatctacga ctgcctcatg ggcttccctg tgctggtggg tgacggcgtc gggtagaggg gcctgtctct gggacagccc tggggctgct catactccag gcatcaggtg gttgagtcct cagacccaat cctttgagat gggcttgatc atcgtcccca ttttccagat	A	Homo sapiens

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404	19072	G Protein-Coupled Receptor	ENSP00000164265	SDERRLPGSA VGWLVCGGLS LLANAWGILS VGAKQKKWKP LEFLLCTLAA THMLNVAVPI ATYSVVQLRR QRPDFEWNEG LCKVFVSTFY TLTLATCFSV TSLSYHRMWM VCWPVNYRLS NAKKQAVHTV MGIWMVSFIL SALPAVGWHD TSERFYTHGC RFIVAEIGLG FGVCFLLLVG	P	Homo sapiens

		Ls19072		GSVAMGVICT AIALFQTLAV QVGRQADRRA FTVPTIVVED AQGKRRSSID GSEPAKTSLQ TTGLVTTIVF IYDCLMGFPV LVVSFSSLRA DASAPWMALC VLWCSVAQAL LLPVFLWACD RYRADLKAVR EKCMALMAND EESDDG		
405	19501	G Protein-Coupled Receptor KIAA0758	AB018301	gtgcaagaag aaaatagatg ttatgcccat ccaaatttg gcaaatgaag aaatgaaggt gatgtgcgac aacaatcctg tatctttgaa ctgctgcagt cagggtaatg ttaattggag caaagtagaa tggaagcagg aaggaaaaat aaatattcca ggaacccctg agacagacat agattctagc tgcagcagat acaccctcaa ggctgatgga acccagtgcc caagcgggtc gtctggaaca acagtcatct acacttgtga gttcatcagt gcctatggag ccagaggcag tgcaaacata aaagtgacat tcatctctgt ggccaatcta acaataaccc cggacccaat ttctgtttct gagggacaaa acttttctat aaaatgcatc agtgatgtga gtaactatga tgaggtttat tggaacactt ctgctggaat taaaatatac caaagatttt ataccacgag gaggtatctt gatggagcag aatcagtact gacagtcaag acctcgacca gggagtggaa tggaacctat cactgcatat ttagatataa gaattcatac agtattgcaa ccaaagacgt cattgttcac ccgctgcctc taaagctgaa catcatggtt gatcctttgg aagctactgt ttcatgcagt ggttcccatc acatcaagtg ctgcatagag gaggatggag actacaaagt tactttccat atgggttcct catcccttcc tgctgcaaaa gaagttaaca aaaaacaagt gtgctacaaa cacaatttca atgcaagctc agtttcctgg tgttcaaaaa ctgttgatgt gtgttgtcac tttaccaatg ctgctaataa ttcagtttgg agcccatcta tgaagctgaa tctggttcct ggggaaaaca tcacatgcca ggatcccgta ataggtgtcg gagagccggg gaaagtcatc cagaagctat gccggttctc aaacgttccc agcagccctg agagtcccat tggcgggacc atcacttaca aatgtgtagg ctcccagtgg gaggagaaga gaaatgactg catctctgcc ccaataaaca gtctgctcca gatggctaag gctttgatca agagcccctc tcaggatgag atgctcccta catacctgaa ggatctttct attagcatag acaaagcgga acatgaaatc agctcttctc ctgggagtct gggagccatt attaacatcc ttgatctgct ctcaacagtt ccaacccaag taaattcaga aatgatgacg cacgtgctct ctacggttaa tgtcatcctt ggcaagcccg tcttgaacac ctggaaggtt ttacaacagc aatggaccaa tcagagttca cagctactac attcagtgga aagattttcc caagcattac agtcaggaga tagccctcct ttgtccttct cccaaactaa tgtgcagatg agcagcacgg taatcaagtc cagccaccca gaaacctatc aacagaggtt tgttttccca tactttgacc tctggggcaa tgtggtcatt gacaagagct atctagaaaa cttgcagtcg gattcgtcta ttgtcaccat ggctttccca actctccaag ccatccttgc tcaggatatc caggaaaata actttgcaga gagcttagtg atgacaacca ctgtcagcca caatacgact atgccattca ggatttcaat gacttttaag aacaatagcc cttcaggcgg cgaaacgaag tgtgtcttct ggaacttcag gcttgccaac aacacagggg ggtgggacag cagtgggtgc tatgttgaag aaggtgatgg ggacaatgtc acctgtatct gtgaccacct aacatcattc tccatcctca tgtcccctga ctccccagat cctagttctc tcctgggaat actcctggat attatttctt atgttggggt gggcttttcc atcttgagct tggcagcctg tctagttgtg gaagctgtgg tgtggaaatc ggtgaccaag aatcggactt cttatatgcg ccacacctgc atagtgaata tcgctgcctc ccttctggtc gccaacacct ggttcattgt ggtcgctgcc atccaggaca atcgctacat actctgcaag acagcctgtg tggctgccac cttcttcatc cacttcttct acctcagcgt cttcttctgg atgctgacac tgggcctcat gctgttctat cgcctggttt tcattctgca	A	Homo sapiens

				tgaaacaagc aggtccactc agaaagccat tgccttctgt cttggctatg gctgcccact		
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				cttcctgatg tcttcttagc taagaggagg aaaaaaaggc tgaaaaaata gggaggaaat		
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				gaaattttac attcggttgt tctgtgctcc taatgacact tgaccttgtt gaacaaatgg		
				cagagccttt cccaaggatt tgattgtttg tgaattatct gcatgtgtgc tttttttttgg		
				tgtgtatttc attaaaaaat ataaatattt atg		
406	19501	G Protein-Coupled Receptor KIAA0758	BAA34478.1	CKKKIDVMPI QILANEEMKV MCDNNPVSLN CCSQGNVNWS KVEWKQEGKI NIPGTPETDI	P	Homo sapiens
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				acaagtgtca tggatactct accactgaat ggtaaccatg gcaatagtta cagcattgcc agcggcgaat acctgagcaa ctgtgtgcaa atcatagacc gtggctataa ccataacgag accgccctag agaaaaagat tctgaaggaa ctcactccca actatatccc ttcttacctg aacaaccatg agcgctccag tgaacagaac aggaatctga tgaacaagct ggtgaataac cttggcagtg gaagggaaga tgatgccatt gtcctggatg atgccacctc gtttaaccac gaggagagtt tgggcctgga actcattcat gaggaatctg atgctccttt gctgccccca agagtatact ccaccgagaa ccaccagcca caccattata ccagaaggcg gatcccccaa gaccacagtg agagcttttt ccctttgcta accaacgagc acacagaaga tctccagtca ccccatagag actctctcta taccagcatg ccgacactgg ctggtgtggc cgccacagag agtgttacca ccagcaccca gaccgaaccc ccaccggcca aatgtggtga tgccgaagat gtttactaca aaagcatgcc aaacctaggc tccagaaacc acgtccatca gctgcatact tactaccagc taggtcgcgg cagcagtgat ggatttatag ttcctccaaa caaagatggg acccctcccg agggaagttc aaaaggaccg gctcatttgg tcactagtct atagaagatg acacagaaat tggaaccaac aaaactgcta acaccttgtt gactgttctg agttgatata agcagtggta ataatgtgtg tactcctaaa tctttatgct gtcctctaaa gacaaacaca aactctcaga cttttttttt tttaatggga tttttaggtc agcccagggg agaaagataa ctgctaaaat tcccctgtac cccatccttt cttgtccttt ccccttcaga tggagacttc attatgttaa tgaacaagat atgaagaaaa tggcactcat tgtggccttg ttgaattatg ttgtgtatgt tttaacatct ctgatgctgt gttactaaaa ttacaaggac ctgcttttta aaaggccaga acaattgtct gaaattagta acaatgctgc atctagattg gagtgctgca caaacaaaca taagagcaaa gcaaaactgt atcacatagg gtttttggtc actcacaacc tgaattcacc acagctggaa tagctgtgga aaacaaaata aaacaacaaa attaataatg aaatggaggg gaattctaga attatatgct aaatgcatat tttatgattt gctgtattaa ctgatgataa aactaatggc agaaaaagaa gttgagcaat ttctatgtaa tgtacagata ctagcattgc acatatagtc tgctttctgt tcctccagaa tttgagtcct gttaatgtag tagaaaaaaa aaaaagaaat tttctttttc ttttgtgctg gtcttgcaag tttgtctacc agtaagagag caaagtttcc ttcctttctt ctctttcttc attttctttt tttctttttt gccttttatt cctttaaaat ttcgcctggc aaaaaataaa taaatggaac tatcacttta taagaatcat tttctagtaa tgcaaacaaa ttattttta caaaaaaaca aaataaataa aattagactt ccttccctca ctatatatct ttatgcagtc agaatatttc caacagtgtt ttttgcaaat tagagcagga caaactttta tgtttacagg gcacgtctgt tgtaatgcaa agcatatttg gcaagcagtt catcaccagg acactagcta tgattctaga agtcaaaagg tgtctataga actagtgggg cttctgcatg tgaaaaacgg ttttccatag gcattaaagt gctgaatgct cagtctgatc aacaagtggg cacctgcact accacttttt agaggaaatt cactccctcg taagcattgg aaggtcaaat tattttgaag tgattttttt taaaaaaaag tcttctgttt attaacagga aaatttattt atttgacagg attttgagta atgtaggaat acaaaaggta aattagcagc acatataatt tttttttaat ttatgatcca ttttgtatgg tctcaaagtt ggatgacctc attactaata tttgttgtaa aagtgaaact tgtttgccaa ccaataaaca actgattgag atttagaaga tattgtaaaa aaaaaaaaaa aaa	
412	22925	Latrophilin-3	NP_056051.1	MWPSQLLIFM MLLAPIIHAF SRAPIPMAVV RRELSCESYP IELRCPGTDV IMIESANYGR P TDDKICDSDP AQMENIRCYL PDAYKIMSQR CNNRTQCAVV AGPDVFPDPC PGTYKYLEVQ	Homo sapiens

				YECVPYKVEQ KVFLCPGLLK GVYQSEHLFE SDHQSGAWCK DPLQASDKIY YMPWTPYRTD TLTEYSSKDD FIAGRPTTTY KLPHRVDGTG FVVYDGALFF NKERTRNIVK FDLRTRIKSG EAIIANANYH DTSPYRWGGK SDIDLAVDEN GLWVIYATEQ NNGKIVISQL NPYTLRIEGT WDTAYDKRSA SNAFMICGIL YVVKSVYEDD DNEATGNKID YIYNTDQSKD SLVDVPFPNS YQYIAAVDYN PRDNLLYVWN NYHVVKYSLD FGPLDSRSGQ AHHGQVSYIS PPIHLDSELE RPSVKDISTT GPLGMGSTTT STTLRTTTLS PGRSTTPSVS GRRNRSTSTP SPAVEVLDDM TTHLPSASSQ IPALEESCEA VEAREIMWFK TRQGQIAKQP CPAGTIGVST YLCLAPDGIW DPQGPDLSNC SSPWVNHITQ KLKSGETAAN IARELAEQTR NHLNAGDITY SVRAMDQLVG LLDVQLRNLT PGGKDSAARS LNKLQKRERS CRAYVQAMVE TVNNLLQPQA LNAWRDLTTS DQLRAATMLL HTVEESAFVL ADNLLKTDIV RENTDNIKLE VARLSTEGNL EDLKFPENMG HGSTIQLSAN TLKQNGRNGE IRVAFVLYNN LGPYLSTENA SMKLGTEALS TNHSVIVNSP VITAAINKEF SNKVYLADPV VFTVKHIKQS EENFNPNCSF WSYSKRTMTG YWSTQGCRLL TTNKTHTTCS CNHLTNFAVL MAHVEVKHSD AVHDLLLDVI TWVGILLSLV CLLICIFTFC FFRGLQSDRN TIHKNLCISL FVAELLFLIG INRTDQPIAC AVFAALLHFF FLAAFTWMFL EGVQLYIMLV EVFESEHSRR KYFYLVGYGM PALIVAVSAA VDYRSYGTDK VCWLRLDTYF IWSFIGPATL IIMLNVIFLG IALYKMFHHT AILKPESGCL DNINYEDNRP FIKSWVIGAI ALLCLLGLTW AFGLMYINES TVIMAYLFTI FNSLQGMFIF IFHCVLQKKV RKEYGKCLRT HCCSGKSTES SIGSGKTSGS RTPGRYSTGS QSRIRRMWND TVRKQSESSF ITGDINSSAS LNREPYRETS MGVKLNIAYQ IGASEQCQGY KCHGYSTTEW		
413	25359	G Protein-Coupled Receptor GPR34	NM_005300	atgagaagtc ataccataac aatgacgaca acttcagtca gcagctggcc ttactcctcc cacagaatgc gctttataac caatcatagc gaccaaccgc cacaaaactt ctcagcaaca ccaaatgtta ctacctgtcc catggatgaa aaattgctat ctactgtgtt aaccacatcc tactctgtta ttttcatcgt gggactggtt gggaacataa tcgccctcta tgtatttctg ggtattcacc gtaaaagaaa ttccattcaa atttatctac ttaacgtagc cattgcagac ctcctactca tcttctgcct ccctttccga ataatgtatc atattaacca aaacaagtgg acactaggtg tgattctgtg caaggttgtg ggaacactgt tttatatgaa catgtacatt agcattattt tgcttggatt catcagtttg gatcgctata taaaaattaa tcggtctata cagcaacgga aggcaataac aaccaaacaa agtatttatg tctgttgtat agtatggatg cttgctcttg gtggattcct aactatgatt attttaacac ttaagaaagg agggcataat tccacaatgt gtttccatta cagagataag cataacgcaa aaggagaagc catttttaac ttcattcttg tggtaatgtt ctggctaatt ttcttactaa taatcctttc atatattaag attgggaaga atctattgag gatttctaaa aggaggtcaa aatttcctaa ttctggtaaa tatgccacta cagctcgtaa ctcctttatt gtacttatca tttttactat atgttttgtt ccctatcatg cctttcgatt catctacatt tcttcacagc taaatgtatc atcttgctac tggaaagaaa ttgttcacaa aaccaatgag atcatgctgg ttctctcatc tttcaatagt tgcttagatc cagtcatgta tttcctgatg tccagtaaca ttcgcaaaat aatgtgccaa cttcttttta gacgatttca aggtgaacca agtaggagtg aaagcacttc agaatttaaa ccaggatact ccctgcatga tacatctgtg gcagtgaaaa tacagtctag ttctaaaagt acttga	A	Homo sapiens
414	25359	G Protein-Coupled	NP_005291.1	MRSHTITMTT TSVSSWPYSS HRMRFITNHS DQPPQNFSAT PNVTTCPMDE KLLSTVLTTS YSVIFIVGLV GNIIALYVFL GIHRKRNSIQ IYLLNVAIAD LLLIFCLPFR IMYHINQNKW	P	Homo sapiens

		Receptor		TLGVILCKVV GTLFYMNMYI SIILLGFISL DRYIKINRSI QQRKAITTKQ SIYVCCIVWM		
		GPR34		LALGGFLTMI ILTLKKGGHN STMCFHYRDK HNAKGEAIFN FILVVMFWLI FLLIILSYIK		
				IGKNLLRISK RRSKFPNSGK YATTARNSFI VLIIFTICFV PYHAFRFIYI SSQLNVSSCY		
				WKEIVHKTNE IMLVLSSFNS CLDPVMYFLM SSNIRKIMCQ LLFRRFQGEP SRSESTSEFK		
				PGYSLHDTSV AVKIQSSSKS T		
415	30698	G Protein-	AX068267	gttctcagat cggcttctcg caacaggcag tcagttctca ctgggcccct tggactccca	A	Homo
		Coupled		tttcaaaaat ggagaagaca gatcacagcc actgaccagg gaccgtggga ggtgccacgt		sapiens
		Receptor		gatggtgagg catcatgcta gggagctgag ctctgacctt cctgctgggt gattctccac		
		Ls30698		ctctgggctg ctagatctac ttcctggatg ccgtgaagat cctcatgtat gaaaatgaag		
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				aagatcaata aaacccgcaa tgccagagcc cagtgtgttg gctggcactc caagaaaagg		
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				tgtaactaca ccagtgtggt gatgtctttt tccattctca tgtcctccaa atcgatgacc		
				gacaaagttc tggactacat cacctgcatt gggctcagcg tctcaatcct aagcttggtt		
				ctttgcctga tcattgaagc cacagtgtgg tcccgggtgg ttgtgacgga gatatcatac		
				atgcgtcacg tgtgcatcgt gaatatagca gtgtcccttc tgactgccaa tgtgtggttt		
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				ggctttgcca ttggctatgg gtgcccattg atcattgctg tcactacagt tgctatcaca		
				gagccagaga acggctacat gagacctgag gcctgttggc ttaactggga caataccaaa		
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				gccttgctca atgctttcca gggtttttc atcctgctgt ttggaaccat tatggatcac		
				aagataagag atgctttgag gatgaggatg tcttcactga aggggaaatc gagggcagct		
				gagaatgcat cactaggccc aaccaatgga tctaaattaa tgaatcgtca aggatgaaat		
				gctgccccat ttctcatgga tgtcctgaga ccaagagggg agatccagga gaaagaggcc		
				atggaaagca ggctggagtg aggaggaatg gtcatgcttc cttggaagac tttctcttct		
				tgtcaggagt gactcccaag ctcttggtcg gccgaagaaa aactgaggat aacatttgct		
				gactgggctt taaggagcat gatttatgga ccccttaacc tacccgtgcc ctgcaagagg		
				ctggcttctt ggtcaatctt gactagatta agagtcaatc tgcaagccat tttatggtct		

416	30698	G Protein-Coupled Receptor Ls30698	CAC27252.1	MKMKSQATMI CCLVFFLSTE CSHYRSKIHL KSYSEVANHI LDTAAISNWA FIPNKNASSD LLQSVNLFAR QLHIHNNSEN IVNELFIQTK GFHINHNTSE KSLNFSMSMN NTTEDILGMV QIPRQELRKL WPNASQAISI AFPTLGAILR EAHLQNVSLP RQVNGLVLSV VLPERLQEII LTFEKINKTR NARAQCVGWH SKKRRWDEKA CQMMLDIRNE VKCRCNYTSV VMSFSILMSS KSMTDKVLDY ITCIGLSVSI LSLVLCLIIE ATVWSRVVVT EISYMRHVCI VNIAVSLLTA NVWFIIGSHF NIKAQDYNMC VAVTFFSHFF YLSLFFWMLF KALLIIYGIL VIFRRMMKSR MMVIGFAIGY GCPLIIAVTT VAITEPENGY MRPEACWLNW DNTKALLAFA IPAFVIVAVN LIVVLVVAVN TQRPSIGSSK SQDVVIIMRI SKNVAILTPL LGLTWGFGIA TLIEGTSLTF HIIFALLNAF QGFFILLFGT IMDHKIRDAL RMRMSSLKGK SRAAENASLG PTNGSKLMNR QG	P	Homo sapiens
417	30875	G Protein-Coupled Receptor GPR87/GPR95	NM_023915	ggcacgaggg tttcgttttc atgctttacc agaaaatcca cttccctgcc gaccttagtt tcaaagctta ttcttaatta gagacaagaa acctgtttca acttgaagac accgtatgag gtgaatggac agccagccac cacaatgaaa gaaatcaaac caggaataac ctatgctgaa cccacgcctc aatcgtcccc aagtgtttcc tgacacgcat ctttgcttac agtgcatcac aactgaagaa tggggttcaa cttgacgctt gcaaaattac caaataacga gctgcacggc caagagagtc acaattcagg caacaggagc gacgggccag gaaagaacac cacccttcac aatgaatttg acacaattgt cttgccggtg ctttatctca ttatatttgt ggcaagcatc ttgctgaatg gtttagcagt gtggatcttc ttccacatta ggaataaaac cagcttcata ttctatctca aaaacatagt ggttgcagac ctcataatga cgctgacatt tccatttcga atagtccatg atgcaggatt tggaccttgg tacttcaagt ttattctctg cagatacact tcagttttgt tttatgcaaa catgtatact tccatcgtgt tccttgggct gataagcatt gatcgctatc tgaaggtggt caagccattt ggggactctc ggatgtacag cataaccttc acgaaggttt tatctgtttg tgtttgggtg atcatggctg ttttgtcttt gccaaacatc atcctgacaa atggtcagcc aacagaggac aatatccatg actgctcaaa acttaaaagt cctttggggg tcaaatggca tacggcagtc acctatgtga acagctgctt gtttgtggcc gtgctggtga ttctgatcgg atgttacata gccatatcca ggtacatcca caaatccagc aggcaattca taagtcagtc aagccgaaag cgaaaacata accagagcat cagggttgtt gtggctgtgt tttttacctg ctttctacca tatcacttgt gcagaattcc ttttactttt agtcacttag acaggctttt agatgaatct gcacaaaaaa tcctatatta ctgcaaagaa attacacttt tcttgtctgc gtgtaatgtt tgcctggatc caataattta ctttttcatg tgtaggtcat tttcaagaag gctgttcaaa aaatcaaata tcagaaccag gagtgaaagc atcagatcac tgcaaagtgt gagaagatcg gaagttcgca tatattatga ttacactgat	A	Homo sapiens

Preceding row (continued from previous page):

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				gtgtaggcct tttattgttt gttggaatcg atatgtacaa agtgtaaata aatgtttctt ttcattatcc ttaaaaaaaa aa		
418	30875	G Protein-Coupled Receptor GPR87/GPR95	NP_076404.1	MGFNLTLAKL PNNELHGQES HNSGNRSDGP GKNTTLHNEF DTIVLPVLYL IIFVASILLN GLAVWIFFHI RNKTSFIFYL KNIVVADLIM TLTFPFRIVH DAGFGPWYFK FILCRYTSVL FYANMYTSIV FLGLISIDRY LKVVKPFGDS RMYSITFTKV LSVCVWVIMA VLSLPNIILT NGQPTEDNIH DCSKLKSPLG VKWHTAVTYV NSCLFVAVLV ILIGCYIAIS RYIHKSSRQF ISQSSRKRKH NQSIRVVVAV FFTCFLPYHL CRIPFTFSHL DRLLDESAQK ILYYCKEITL FLSACNVCLD PIIYFFMCRS FSRRLFKKSN IRTRSESIRS LQSVRRSEVR IYYDYTDV	P	Homo sapiens
419	31568	G Protein-Coupled Receptor RE2	NM_007369	ggccttatct ttccagtcgt ccagcatgct ctgcccaccc cacgccgagg tgcactgacc atgagcctca actcctccct cagctgcagg aaggagctga gtaatctcac tgaggaggag ggtggcgaag gggcgtcat catcacccag ttcatcgcca tcattgtcat caccattttt gtctgcctgg gaaacctggt catcgtggtc accttgtaca agaagtccta cctcctcacc ctcagcaaca agttcgtctt cagcctgact ctgtccaact tcctgctgtc cgtgttggtg ctgccttttg tggtgacgag ctccatccgc agggaatgga tctttggtgt agtgtggtgc aacttctctg ccctcctcta cctgctgatc agctctgcca gcatgctaac cctcggggtc attgccatcg accgctacta tgctgtcctg taccccatgg tgtaccccat gaagatcaca gggaaccggg ctgtgatggc acttgtctac atctggcttc actcgctcat cggctgcctg ccacccctgt ttggttggtc atccgtggag tttgacgagt tcaaatggat gtgtgtggct gcttggcacc gggagcctgg ctacacggcc ttctggcaga tctggtgtgc cctcttcccc tttctggtca tgctggtgtg ctatggcttc atcttccgcg tggccagggt caaggcacgc aaggtgcact gtggcacagt cgtcatcgtg gaggaggatg ctcagaggac cgggaggaag aactccagca cctccacctc ctcttcaggc agcaggagga atgcctttca gggtgtggtc tactcggcca accagtgcaa agccctcatc accatcctgg tggtcctcgg tgccttcatg gtcacctggg gcccctacat ggttgtcatc gcctctgagg ccctctgggg gaaaagctcc gtctccccga gcctggagac ttgggccaca tggctgtcct ttgccagcgc tgtctgccac cccctgatct atggactctg gaacaagaca gttcgcaaag aactactggg catgtgcttt ggggaccggt attatcggga accatttgtg caacgacaga ggacttccag gctcttcagc atttccaaca ggatcacaga cctgggcctg tccccacacc tcactgcgct catggcaggt ggacagcccc tggggcacag cagcagcacg gggacactgg gcttcagctg ctcccaggac tcaggtaacc tgcgtgcttt ataagcctct cacctgtcgc gttttccctg tgttgcgttt cccccgtgtc gcgtttcccc tgtgcaggct caagagctgg cggaggggca tttcccacgg tg	A	Homo sapiens
420	31568	G Protein-Coupled Receptor RE2	NP_031395.1	MSLNSSLSCR KELSNLTEEE GGEGGVIITQ FIAIIVITIF VCLGNLVIVV TLYKKSYLLT LSNKFVFSLT LSNFLLSVLV LPFVVTSSIR REWIFGVVWC NFSALLYLLI SSASMLTLGV IAIDRYYAVL YPMVYPMKIT GNRAVMALVY IWLHSLIGCL PPLFGWSSVE FDEFKWMCVA AWHREPGYTA FWQIWCALFP FLVMLVCYGF IFRVARVKAR KVHCGTVVIV EEDAQRTGRK NSSTSTSSSG SRRNAFQGVV YSANQCKALI TILVVLGAFM VTWGPYMVVI ASEALWGKSS VSPSLETWAT WLSFASAVCH PLIYGLWNKT VRKELLGMCF GDRYYREPFV QRQRTSRLFS ISNRITDLGL SPHLTALMAG GQPLGHSSST GDTGFSCSQD SGNLRAL	P	Homo sapiens
421	36534	G Protein-Coupled	NM_003667	atggacacct cccggctcgg tgtgctcctg tccttgcctg tgctgctgca gctggcgacc gggggcagct ctcccaggtc tggtgtgttg ctgaggggct gccccacaca ctgtcattgc	A	Homo sapiens

Receptor
GPR49

gagcccgacg gcaggatgtt gctcagggtg gactgctccg acctggggct ctcggagctg
ccttccaacc tcagcgtctt cacctcctac ctagacctca gtatgaacaa catcagtcag
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gaactaggat ttcatagcaa caatatcagg tcgatacctg agaaagcatt tgtaggcaac
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422	36534	G Protein-Coupled Receptor GPR49	NP_003658.1	MDTSRLGVLL SLPVLLQLAT GGSSPRSGVL LRGCPTHCHC EPDGRMLLRV DCSDLGLSEL PSNLSVFTSY LDLSMNNISQ LLPNPLPSLR FLEELRLAGN ALTYIPKGAF TGLYSLKVLM LQNNQLRHVP TEALQNLRSL QSLRLDANHI SYVPPSCFSG LHSLRHLWLD DNALTEIPVQ AFRSLSALQA MTLALNKIHH IPDYAFGNLS SLVVLHLHNN RIHSLGKKCF DGLHSLETLD LNYNNLDEFP TAIRTLSNLK ELGFHSNNIR SIPEKAFVGN PSLITIHFYD NPIQFVGRSA FQHLPELRTL TLNGASQITE FPDLTGTANL ESLTLTGAQI SSLPQTVCNQ LPNLQVLDLS YNLLEDLPSF SVCQKLQKID LRHNEIYEIK VDTFQQLLSL RSLNLAWNKI AIIHPNAFST LPSLIKLDLS SNLLSSFPIT GLHGLTHLKL TGNHALQSLI SSENFPELKV IEMPYAYQCC AFGVCENAYK ISNQWNKGDN SSMDDLHKKD AGMFQAQDER DLEDFLLDFE EDLKALHSVQ CSPSPGPFKP CEHLLDGWLI RIGVWTIAVL ALTCNALVTS TVFRSPLYIS PIKLLIGVIA AVNMLTGVSS AVLAGVDAFT FGSFARHGAW WENGVGCHVI GFLSIFASES SVFLLTLAAL ERGFSVKYSA KFETKAPFSS LKVIILLCAL LALTMAAVPL LGGSKYGASP LCLPLPFGEP STMGYMVALI LLNSLCFLMM TIAYTKLYCN LDKGDLENIW DCSMVKHIAL LLFTNCILNC PVAFLSFSSL INLTFISPEV IKFILLVVVP LPACLNPLLY ILFNPHFKED LVSLRKQTYV WTRSKHPSLM SINSDDVEKQ SCDSTQALVT FTSSSITYDL PPSSVPSPAY PVTESCHLSS VAFVPCL	P	Homo sapiens
423	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NM_004736	actagagatg gcgggcgggc tgctctgaag agacctcggc ggcggcggag gaggagagaa gcgcagcgcc gcgccgcgcc ggggcccatg tggggaggag tcggagtcgc tgttgccgcc gccgcctgta gctgctggac ccgagtggga gtgaggggga aacggcagga tgaagttcgc cgagcacctc tccgcgcaca tcactcccga gtggaggaag caatacatcc agtatgaggc tttcaaggat atgctgtatt cagctcagga ccaggcacct tctgtggaag ttacagatga ggacacagta aagaggtatt ttgccaagtt tgaagagaag tttttccaaa cctgtgaaaa agaacttgcc aaaatcaaca cattttattc agagaagctc gcagaggctc agcgcaggtt tgctacactt cagaatgagc ttcagtcatc actggatgca cagaaagaaa gcactggtgt tactacgctg cgacaacgca gaaagccagt cttccacttg tcccatgagg aacgtgtcca acatagaaat attaaagacc ttaaactggc cttcagtgag ttctacctca gtctaatcct gctgcagaac tatcagaatc tgaattttac agggtttcga aaaatcctga aaaagcatga caagatcctg gaaacatctc gtggagcaga ttggcgagtg gctcacgtag aggtggcccc attttataca tgcaagaaaa tcaaccagct tatctctgaa actgaggctg tagtgaccaa tgaacttgaa gatggtgaca gacaaaaggc tatgaagcgt ttacgtgtcc cccctttggg agctgctcag cctgcaccag catggactac ttttagagtt ggcctatttt gtggaatatt cattgtactg aatattaccc ttgtgcttgc cgctgtattt aaacttgaaa cagatagaag tatatggccc ttgataagaa tctatcgggg tggctttctt ctgattgaat tcctttttct actgggcatc aacacgtatg gttggagaca ggctggagta aaccatgtac tcatctttga acttaatccg agaagcaatt tgtctcatca acatctcttt gagattgctg gattcctcgg gatattgtgg tgcctgagcc ttctggcatg cttctttgct ccaattagtg tcatccccac atatgtgtat ccacttgccc tttatggatt tatggttttc ttccttatca accccaccaa aactttctac tataaatccc ggttttggct gcttaaactg ctgtttcgag tatttacagc	A	Homo sapiens

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424	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NP_004727.1	MKFAEHLSAH ITPEWRKQYI QYEAFKDMLY SAQDQAPSVE VTDEDTVKRY FAKFEEKFFQ TCEKELAKIN TFYSEKLAEA QRRFATLQNE LQSSLDAQKE STGVTTLRQR RKPVFHLSHE ERVQHRNIKD LKLAFSEFYL SLILLQNYQN LNFTGFRKIL KKHDKILETS RGADWRVAHV EVAPFYTCKK INQLISETEA VVTNELEDGD RQKAMKRLRV PPLGAAQPAP AWTTFRVGLF CGIFIVLNIT LVLAAVFKLE TDRSIWPLIR IYRGGFLLIE FLFLLGINTY GWRQAGVNHV LIFELNPRSN LSHQHLFEIA GFLGILWCLS LLACFFAPIS VIPTYVYPLA LYGFMVFFLI NPTKTFYYKS RFWLLKLLFR VFTAPFHKVG FADFWLADQL NSLSVILMDL EYMICFYSLE LKWDESKGLL PNNSEESGIC HKYTYGVRAI VQCIPAWLRF IQCLRRYRDT KRAFPHLVNA GKYSTTFFMV AFAALYSTHK ERGHSDTMVF FYLWIVFYII SSCYTLIWDL KMDWGLFDKN AGENTFLREE IVYPQKAYYY CAIIEDVILR FAWTIQISIT STTLLPHSGD IIATVFAPLE VFRRFVWNFF RLENEHLNNC GEFRAVRDIS VAPLNADDQT LLEQMMDQDD GVRNRQKNRS WKYNQSISLR RPRLASQSKA RDTKVLIEDT DDEANT	P	Homo sapiens

425	40881	Lung Seven Transmembrane Receptor 2 (LUSTR2)	AX073578	agagatggca gtgagcgaga ggagggggct cggccgcggg agccccgcgg agtgggggca gcggctactt ctggtgctgc tgttgggtgg ctgctccggg cgcatccacc ggctggcgct gacgggggag aagcgagcgg acatccagct gaacagcttc ggtttctaca ccaatggctc tctggaggtg gagttgagcg tcctgcggct gggcctccgg gaggcagaag agaagtccct gctggtgggg ttcagtctca gccgggttcg gtctggcaga gttcgctcct attcaacccg ggatttccag gactgccctc tccagaaaaa cagtagcagt ttcctggtcc tgttcctcat caacaccaag gatctgcagg tccaggtgcg gaagtatgga gagcagaaga cgttgtttat ctttcccggg ctcctcccgg aagcaccctc caaaccaggg ctcccgaagc cacaggccac agtccccccgc aaggtggatg gcggagggac ctctgcagcc agcaagccca agtcaacacc cgcagtgatt cagggtccta gtgggaagga caaggacctg gtgttgggcc tgagccacct caacaactcc tacaacttca gtttccacgt ggtgatcggc tctcaggcgg aagaaggcca gtacagcctg aacttccaca actgcaacaa ttcagtgcca ggaaaggagc atccattcga catcacggtg atgatccggg agaagaaccc cgatggcttc ctgtcggcag cggagatgcc ccttttcaag ctctacatgg tcatgtccgc ctgcttcctg gccgctggca tcttctgggt gtccatcctc tgcaggaaca cgtacagcgt cttcaagatc cactggctca tggcggcctt ggccttcacc aagagcatct ctctcctctt ccacagcatc aactactact tcatcaacag ccagggccac cccatcgaag gccttgccgt catgtactac atcgcacacc tgctgaaggg cgccctcctc ttcatcacca tcgccctgat tggctcaggc tgggccttca tcaagtacgt cctgtcggat aaggagaaga aggtctttgg gatcgtgatc cccatgcagg tcctggccaa cgtggcctac atcatcatcg agtcccgcga ggaaggcgcc agcgactacg tgctgtggaa ggagattttg ttcctggtgg acctcatctg ctgtggtgcc atcctgttcc ccgtagtctg gtccatccgg catctccagg atgcgtctgg cacagacggg aaggtggcag tgaacctggc caagctgaag ctgttccggc attactatgt catggtcatc tgctacgtct acttcacccg catcatcgcc atcctgctgc aggtggctgt gccctttcag tggcagtggc tgtaccagct cttggtggag ggctccaccc tggccttctt cgtgctcacg ggctacaagt tccagcccac agggaacaac ccgtacctgc agctgcccca ggaggacgag gaggatgttc agatggagca agtaatgacg gactctgggt tccgggaagg cctctccaaa gtcaacaaaa cagccagcgg gcgggaactg ttatgatcac ctccacatct cagaccaaag ggtcgtcctc cccccagcatt tctcactcct gcccttcttc cacagcgtat gtggggaggt ggagggggtc catgtggacc aggcgcccag ctcccccggga ccccggttcc cggacaagcc catttggaag aagagtccct tcctcccccc aaatattggg cagccctgtc cttaccccgg gaccacccct cccttccagc tatgtgtaca ataatgacca atctgtttgg ct	A	Homo sapiens
426	40881	Lung Seven Transmembrane Receptor 2 (LUSTR2)	CAC28410.1	MAVSERRGLG RGSPAEWGQR LLLVLLLGGC SGRIHRLALT GEKRADIQLN SFGFYTNGSL EVELSVLRLG LREAEEKSLL VGFSLSRVRS GRVRSYSTRD FQDCPLQKNS SSFLVLFLIN TKDLQVQVRK YGEQKTLFIF PGLLPEAPSK PGLPKPQATV PRKVDGGGTS AASKPKSTPA VIQGPSGKDK DLVLGLSHLN NSYNFSFHVV IGSQAEEGQY SLNFHNCNNS VPGKEHPFDI TVMIREKNPD GFLSAAEMPL FKLYMVMSAC FLAAGIFWVS ILCRNTYSVF KIHWLMAALA FTKSISLLFH SINYYFINSQ GHPIEGLAVM YYIAHLLKGA LLFITIALIG SGWAFIKYVL SDKEKKVFGI VIPMQVLANV AYIIIESREE GASDYVLWKE ILFLVDLICC GAILFPVVWS IRHLQDASGT DGKVAVNLAK LKLFRHYYVM VICYVYFTRI IAILLQVAVP FQWQWLYQLL VEGSTLAFFV LTGYKFQPTG NNPYLQLPQE DEEDVQMEQV MTDSGFREGL SKVNKTASGR	P	Homo sapiens

427	42697	G Protein-Coupled Receptor GPR64	NM_005756	ELL	A	Homo sapiens

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428 42697 G Protein-Coupled NP_005747.1 MVFSVRQCGH VGRTEEVLLT FKIFLVIICL HVVLVTSLEE DTDNSSLSPP PAKLSVVSFA P Homo sapiens
PSSNEVETTS LNDVTLSLLP SNETEKTKIT IVKTFNASGV KPQRNICNLS SICNDSAFFR

		Receptor		GEIMFQYDKE STVPQNQHIT NGTLTGVLSL SELKRSELNK TLQTLSETYF IMCATAEAQS		
		GPR64		TLNCTFTIKL NNTMNACAAI AALERVKIRP MEHCCCSVRI PCPSSPEELG KLQCDLQDPI		
				VCLADHPRGP PFSSSQSIPV VPRATVLSQV PKATSFAEPP DYSPVTHNVP SPIGEIQPLS		
				PQPSAPIASS PAIDMPPQSE TISSPMPQTH VSGTPPPVKA SFSSPTVSAP ANVNTTSAPP		
				VQTDIVNTSS ISDLENQVLQ MEKALSLGSL EPNLAGEMIN QVSRLLHSPP DMLAPLAQRL		
				LKVVDDIGLQ LNFSNTTISL TSPSLALAVI RVNASSFNTT TFVAQDPANL QVSLETQAPE		
				NSIGTITLPS SLMNNLPAHD MELASRVQFN FFETPALFQD PSLENLSLIS YVISSSVANL		
				TVRNLTRNVT VTLKHINPSQ DELTVRCVFW DLGRNGGRGG WSDNGCSVKD RRLNETICTC		
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				gaaagtctaa aagaagtaca gtggattcaa aggccatggg agagaaatcc ttttctgttc		
				ataataatgg tggggcagtg tcatttcagt ttttctttaa catcagcact gatgaccaag		
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				ccatctggat tcatatcctt cgaaaacgac ggaatgatgt atttaaaatc cactggctga		
				tggcggccct tcctttcacc aagtctcttt ccttggtgtt ccatgcaatt gactaccact		
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				gcttgtggaa ggactctcta tttctggtcg acctgttgtg ttgtggtgcc atcctcttcc		
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				acttcactag gatcattgca tttctcctca aactcgctgt tccattccag tggaagtggc		
				tctaccagct cctggatgaa acggccacac tggtcttctt tgttctaacg gggtataaat		
				tccgtccggc ttcagataac ccctacctac aactttctca ggaagaagaa gacttggaaa		

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430	45937	KIAA1624 Protein	AAK57695	MAALAPVGSP ASRGPRLAAG LRLLPMLGLL QLLAEPGLGR VHHLALKDDV RHKVHLNTFG FFKDGYMVVN VSSLSLNEPE DKDVTIGFSL DRTKNDGFSS YLDEDVNYCI LKKQSVSVTL LILDISRSEV RVKSPPEAGT QLPKIIFSRD EKVLGQSQEP NVNPASAGNQ TQKTQDGGKS KRSTVDSKAM GEKSFSVHNN GGAVSFQFFF NISTDDQEGL YSLYFHKCLG KELPSDKFTF SLDIEITEKN PDSYLSAGEI PLPKLYISMA FFFFLSGTIW IHILRKRRND VFKIHWLMAA LPFTKSLSLV FHAIDYHYIS SQGFPIEGWA VVYYITHLLK GALLFITIAL IGTGWAFIKH ILSDKDKKIF MIVIPLQVLA NVAYIIIEST EEGTTEYGLW KDSLFLVDLL CCGAILFPVV WSIRHLQEAS ATDGKAAINL AKLKLFRHYY VLIVCYIYFT RIIAFLLKLA VPFQWKWLYQ LLDETATLVF FVLTGYKFRP ASDNPYLQLS QEEEDLEMES VVTTSGVMES MKKVKKVTNG SVEPQGEWEG AV	P	Homo sapiens
431	50847	Neurotensin Receptor type 2	NM_012344	gagtgagagg gagggagcgc cggccgcggg agcgggatgg aaaccagcag cccgcggccc ccgcggccca gctccaaccc ggggctgagc ctggacgccc ggctgggcgt ggacactcgc ctctgggcca aggtgctgtt caccgcgctc tacgcactca tctgggcgct gggcgcggcg ggcaatgcgc tgtccgtgca cgtggtgctg aaggcgcggg ccgggcgcgc ggggcgcctg cgccaccacg tgctcagcct ggcgctcgcg ggcctgctgc tgctgctggt cggcgtgccg gtggagctct acagcttcgt gtggttccac taccccctggg tcttcggcga cctgggctgc cgcggctact acttcgtgca cgagctgtgc gcctacgcca cggtgctgag cgtggcaggc ctgagcgccg agcgctgcct agccgtgtgc cagcccctgc gtgcccgcag cctgctgacg ccacgccgga cccggtggct ggtggcgctc tcgtgggccg cctcgctcgg cctcgccctg cccatggccg tcatcatggg gcagaagcac gaactcgaga cggcggacgg ggagccggag cccgcctcgc gagtgtgcac ggtgctggtg agccgcaccg cgctccaagt ctttatccag gtgaatgtgc tggtgtcctt cgtgctcccc ttggcactaa ctgctttcct gaatggggtc	A	Homo sapiens

				acagtgagcc acctgctggc cctctgctcc caagtgccgt ccacttctac cccgggcagc tccaccccca gccgcctgga gctgctgagt gaggagggtc tcctcagctt catcgtatgg aagaagacct ttatccaggg aggccaggtc agcctggtga gacataaaga cgtgcgccgg atccgcagcc tccagcgcag cgtccaggtt ctcagagcca tcgtggtcat gtatgtcatc tgctggctgc cgtaccatgc ccgcaggctc atgtactgct acgtacctga tgacgcgtgg actgacccac tgtacaattt ctaccactac ttctacatgg tgaccaacac acttttctac gtcagctcag ctgtgactcc tcttctctac aacgccgtgt cctcctcctt cagaaaactc ttcctggaag ccgtcagctc cctgtgtgga gagcaccacc ccatgaagcg gttacccccg aagccccaga gtcccaccct aatggataca gcttcaggct ttggggatcc cccagaaacc cggacctgaa tgtaatgcaa gaatgaacag aacaagcaaa atgaccagct gcttagtcac ctggcaaagc aggtgagcaa cctcatcact aatcattcaa gcttcgcagc cagggcgact tctatcaacc cctgctctgc tgagaaccat caagcgcagg gaagccacgt gacccctcct agcctcaggc tccctcgtct gtgtagtgga gataaagaac agcacccatc tcttagtgtt gcctgagact aaagtgctta gcacagaacc tggtgcgtag tagatgctca ataaattttt gctggcacg		
432	50847	Neurotensin Receptor type 2	NP_036476.1	METSSPRPPR PSSNPGLSLD ARLGVDTRLW AKVLFTALYA LIWALGAAGN ALSVHVVLKA RAGRAGRLRH HVLSLALAGL LLLLVGVPVE LYSFVWFHYP WVFGDLGCRG YYFVHELCAY ATVLSVAGLS AERCLAVCQP LRARSLLTPR RTRWLVALSW AASLGLALPM AVIMGQKHEL ETADGEPEPA SRVCTVLVSR TALQVFIQVN VLVSFVLPLA LTAFLNGVTV SHLLALCSQV PSTSTPGSST PSRLELLSEE GLLSFIVWKK TFIQGGQVSL VRHKDVRRIR SLQRSVQVLR AIVVMYVICW LPYHARRLMY CYVPDDAWTD PLYNFYHYFY MVTNTLFYVS SAVTPLLYNA VSSSFRKLFL EAVSSLCGEH HPMKRLPPKP QSPTLMDTAS GFGDPPETRT	P	Homo sapiens
433	53440	G Protein-Coupled Receptor LS53440	AX107037	cagagaggct gtatttcagt gcagcctgcc agacctcttc tggaggaaga ctggacaaag ggggtcacac attccttcca tacggttgag cctctacctg cctggtgctg gtcacagttc agcttcttca tgatggtgga tcccaatggc aatgaatcca gtgctacata cttcatccta ataggcctcc ctggtttaga agaggctcag ttctggttgg ccttcccatt gtgctccctc taccttattg ctgtgctagg taacttgaca atcatctaca ttgtgcggac tgagcacagc ctgcatgagc ccatgtatat atttctttgc atgctttcag gcattgacat cctcatctcc acctcatcca tgcccaaaat gctggccatc ttctggttca attccactac catccagttt gatgcttgtc tgctacagat ttttgccatc cactccttat ctggcatgga atccacagtg ctgctggcca tggctttga ccgctatgtg gccatctgtc acccactgcg ccatgccaca gtacttacgt tgcctcgtgt caccaaaatt ggtgtggctg ctgtggtgcg gggggctgca ctgatggcac cccttcctgt cttcatcaag cagctgccct tctgccgctc caatatcctt tcccattcct actgcctaca ccaagatgtc atgaagctgg cctgtgatga tatccgggtc aatgtcgtct atggccttat cgtcatcatc tccgccattg gcctggactc acttctcatc tccttctcat atctgcttat tcttaagact gtgttgggct tgacacgtga agcccaggcc aaggcatttg gcacttgcgt ctctcatgtg tgtgctgtgt tcatattcta tgtacctttc attggattgt ccatggtgca tcgctttagc aagcggcgtg actctccgct gcccgtcatc ttggccaata tctatctgct ggttcctcct gtgctcaacc caattgtcta tggagtgaag acaaaggaga ttcgacagcg catccttcga cttttccatg tggccacaca cgcttcagag ccctaggtgt cagtgatcaa acttcttttc cattcagagt cctctgattc agattttaat	A	Homo sapiens

				gttaacattt tggaagacag tattcagaaa aaaaatttcc ttaataaaaa atacaactca gatccttcaa atatgaaact ggttggggaa tctccatttt ttcaatatta ttttcttctt tgttttcttg ctacatataa ttattaatac cctgactagg ttgtggttgg agggttatta cttttcattt taccatgcag tccaaatcta aactgcttct actgatggtt tacagcattc tgagataaga atggtacatc tagagaacat ttgccaaagg cctaagcacg gcaaaggaaa ataaacacag aatataataa aatgagataa tctagcttaa aactataact tcctcttcag aactcccaac cacattggat ctcagaaaaa tgctgtcttc aaaatgactt ctacagagaa gaaataattt ttcctctgga cactagcact taaggggaag attggaagta aagccttgaa aagagtacat ttacctacgt taatgaaagt tgacacactg ttctgagagt tttcacagca tatggaccct gtttttccta tttaattttc ttatcaaccc tttaattagg caaagatatt attagtaccc tcattgtagc catgggaaaa ttgatgttca gtggggatca gtgaattaaa tggggtcata caagtataaa aattaaaaaa aaaaaagact tcatgcccaa tctcatatga tgtggaagaa ctgttagaga gaccaacagg gtagtgggtt agagatttcc agagtcttac attttctaga ggaggtattt aatttcttct cactcatcca gtgttgtatt taggaatttc ctggcaacag aactcatggc tttaatccca ctagctattg cttattgtcc tggtccaatt gccaattacc tgtgtcttgg aagaagtgat ttctaggttc accattatgg aagattctta ttcagaaagt ctgcataggg cttatagcaa gttatttatt tttaaaagtt ccataggtga ttctgatagg cagtgaggtt agggagccac cagttatgat gggaagtatg gaatggcagg tcttgaagat aacattggcc ttttgagtgt gactcgtagc tggaaagtga gggaatcttc aggaccatgc tttatttggg gctttgtgca gtatggaaca gggactttga gaccaggaaa gcaatctgac ttaggcatgg gaatcaggca tttttgcttc tgaggggcta ttaccaaggg ttaataggtt tcatcttcaa caggatatga caacagtgtt aaccaagaaa ctcaaattac aaatactaaa acatgtgatc atatatgtgg taagtttcat tttcttttc aatcctcagg ttccctgata tggattccta taacatgctt tcatcccctt ttgtaatgga tatcatattt ggaaatgcct atttaatact tgtatttgct gctggactgt aagcccatga gggcactgtt tattattgaa tgtcatctct gttcatcatt gactgctctt tgctcatcat tgaatccccc agcaaagtgc ctagaacata atagtgctta tgcttgacac cggttatttt tcatcaaacc tgattccttc tgtcctgaac acatagccag gcaattttcc agccttcttt gagttgggta ttattaaatt ctggccatta cttccaatgt gagtggaagt gacatgtgca atttctatac ctggctcata aaaccctccc atgtgcagcc tttcatgttg acattaaatg tgacttggga agctatgtgt tacacagagt aaatcaccag aagcctggat ttctgaaaaa actgtgcaga gccaaacctc tgtcatttgc aactcccact tgtatttgta cgaggcagtt ggataagtga aaaataaagt actattgtgt caagaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa	
434	53440	G Protein- Coupled Receptor LS53440	CAC38935.1	MMVDPNGNES SATYFILIGL PGLEEAQFWL AFPLCSLYLI AVLGNLTIIY IVRTEHSLHE P PMYIFLCMLS GIDILISTSS MPKMLAIFWF NSTTIQFDAC LLQMFAIHSL SGMESTVLLA MAFDRYVAIC HPLRHATVLT LPRVTKIGVA AVVRGAALMA PLPVFIKQLP FCRSNILSHS YCLHQDVMKL ACDDIRVNVV YGLIVIISAI GLDSLLISFS YLLILKTVLG LTREAQAKAF GTCVSHVCAV FIFYVPFIGL SMVHRFSKRR DSPLPVILAN IYLLVPPVLN PIVYGVKTKE IRQRILRLFH VATHASEP	Homo sapiens

435	54053	Gaba(b) Receptor 2	NM_005458	atggcttccc cgcggaggtc cgggcagcca gggcggccgc cgccgccgcc accgccgccc gcgcgcctgc tactgctact gctgctgccg ctgctgctgc ctctggcgcc cggggcctgg ggctgggcgc ggggcgcccc ccggccgccg cccagcagcc cgccgctctc catcatgggc ctcatgccgc tcaccaagga ggtggccaag ggcagcatcg ggcgcggtgt gctccccgcc gtggaactgg ccatcgagca gatccgcaac gagtcactcc tgcgccccta cttcctcgac ctgcggctct atgacacgga gtgcgacaac gcaaaagggt tgaaagcctt ctacgatgca ataaaatacg ggccgaacca cttgatggtg tttggaggcg tctgtccatc cgtcacatcc atcattgcag agtccctcca aggctggaat ctggtgcagc tttcttttgc tgcaaccacg cctgttctag ccgataagaa aaaatacccct tatttctttc ggaccgtccc atcagacaat gcggtgaatc cagccattct gaagttgctc aagcactacc agtggaagcg cgtgggcacg ctgacgcaag acgttcagag gttctctgag gtgcggaatg acctgactgg agttctgtat ggcgaggaca ttgagatttc agacaccgag agcttctcca acgatccctg taccagtgtc aaaaagctga aggggaatga tgtgcggatc atccttggcc agtttgacca gaatatggca gcaaaagtgt tctgttgtgc atacgaggag aacatgtatg gtagtaaata tcagtggatc attccgggct ggtacgagcc ttcttggtgg gagcaggtgc acacggaagc caactcatcc cgctgcctcc ggaagaatct gcttgctgcc atggagggct acattggcgt ggatttcgag cccctgagct ccaagcagat caagaccatc tcaggaaaga ctccacagca gtatgagaga gagtacaaca acaagcggtc aggcgtgggg cccagcaagt tccacgggta cgcctacgat ggcatctggg tcatcgccaa gacactgcag agggccatgg agacactgca tgccagcagc cggcaccagc ggatccagga cttcaactac acggaccaca cgctgggcag gatcatcctc aatgccatga acgagaccaa cttcttcggg gtcacgggtc aagttgtatt ccggaatggg gagagaatgg ggaccattaa atttactcaa tttcaagaca gcagggaggt gaaggtggga gagtacaacg ctgtggccga cacactggag atcatcaatg acaccatcag gttccaagga tccgaaccac caaaagacaa gaccatcatc ctggagcagc tgcggaagat ctccctacct ctctacagca tcctctctgc cctcaccatc ctcgggatga tcatggccag tgcttttctc ttcttcaaca tcaagaaccg gaatcagaag ctcataaaga tgtcgagtcc atacatgaac aaccttatca tccttggagg gatgctctcc tatgcttcca tatttctctt tggccttgat ggatcctttg tctctgaaaa gacctttgaa acactttgca ccgtcaggac ctggattctc accgtgggct acacgaccgc ttttggggcc atgtttgcaa agacctggag agtccacgcc atcttcaaaa atgtgaaaat gaagaagaag atcatcaagg accagaaact gcttgtgatc gtgggggggca tgctgctgat cgacctgtgt atcctgatct gctggcaggc tgtggacccc ctgcgaagga cagtggagaa gtacagcatg gagccggacc cagcaggacg ggatatctcc atccgccctc tcctggagca ctgtgagaac acccatatga ccatctggct tggcatcgtc tatgcctaca agggacttct catgttgttc ggttgtttct tagcttggga gacccgcaac gtcagcatcc ccgcactcaa cgacagcaag tacatcggga tgagtgtcta caacgtgggg atcatgtgca tcatcggggc cgctgtctcc ttcctgaccc gggaccagcc caatgtgcag ttctgcatcg tggctctggt catcatcttc tgcagcacca tcaccctctg cctggtattc gtgccgaagc tcatcaccct gagaacaaac ccagatgcag caacgcagaa caggcgattc cagttcactc agaatcagaa gaaagaagat tctaaaacgt ccacctcggt caccagtgtg aaccaagcca gcacatcccg cctggagggc ctacagtcag aaaaccatcg cctgcgaatg aagatcacag agctggataa agacttggaa gaggtcacca tgcagctgca ggacacacca	A	Homo sapiens

				gaaaagacca cctacattaa acagaaccac taccaagagc tcaatgacat cctcaacctg		
				ggaaacttca ctgagagcac agatggagga aaggccattt taaaaaatca cctcgatcaa		
				aatccccagc tacagtggaa cacaacagag ccctctcgaa catgcaaaga tcctatagaa		
				gatataaact ctccagaaca catccagcgt cggctgtccc tccagctccc catcctccac		
				cacgcctacc tcccatccat cggaggcgtg gacgccagct gtgtcagccc ctgcgtcagc		
				cccaccgcca gcccccgcca cagacatgtg ccaccctcct tccgagtcat ggtctcgggc		
				ctgtaa		
436	54053	Gaba(b) Receptor 2	NP_005449.1	MASPRRSGQP GRPPPPPPPP ARLLLLLLLP LLLPLAPGAW GWARGAPRPP PSSPPLSIMG	P	Homo sapiens
				LMPLTKEVAK GSIGRGVLPA VELAIEQIRN ESLLRPYFLD LRLYDTECDN AKGLKAFYDA		
				IKYGPNHLMV FGGVCPSVTS IIAESLQGWN LVQLSFAATT PVLADKKKYP YFFRTVPSDN		
				AVNPAILKLL KHYQWKRVGT LTQDVQRFSE VRNDLTGVLY GEDIEISDTE SFSNDPCTSV		
				KKLKGNDVRI ILGQFDQNMA AKVFCCAYEE NMYGSKYQWI IPGWYEPSWW EQVHTEANSS		
				RCLRKNLLAA MEGYIGVDFE PLSSKQIKTI SGKTPQQYER EYNNKRSGVG PSKFHGYAYD		
				GIWVIAKTLQ RAMETLHASS RHQRIQDFNY TDHTLGRIIL NAMNETNFFG VTGQVVFRNG		
				ERMGTIKFTQ FQDSREVKVG EYNAVADTLE IINDTIRFQG SEPPKDKTII LEQLRKISLP		
				LYSILSALTI LGMIMASAFL FFNIKNRNQK LIKMSSPYMN NLIILGGMLS YASIFLFGLD		
				GSFVSEKTFE TLCTVRTWIL TVGYTTAFGA MFAKTWRVHA IFKNVKMKKK IIKDQKLLVI		
				VGGMLLIDLC ILICWQAVDP LRRTVEKYSM EPDPAGRDIS IRPLLEHCEN THMTIWLGIV		
				YAYKGLLMLF GCFLAWETRN VSIPALNDSK YIGMSVYNVG IMCIIGAAVS FLTRDQPNVQ		
				FCIVALVIIF CSTITLCLVF VPKLITLRTN PDAATQNRRF QFTQNQKKED SKTSTSVTSV		
				NQASTSRLEG LQSENHRLRM KITELDKDLE EVTMQLQDTP EKTTYIKQNH YQELNDILNL		
				GNFTESTDGG KAILKNHLDQ NPQLQWNTTE PSRTCKDPIE DINSPEHIQR RLSLQLPILH		
				HAYLPSIGGV DASCVSPCVS PTASPRHRHV PPSFRVMVSG L		
437	55728	ETL protein	NM_022159	gtgaaattta aactccagtc ctgtggcgaa aatgctaatt gcactaacac agaaggaagt	A	Homo sapiens
				tattattgta tgtgtgtacc tggcttcaga tccagcagta accaagacag gtttatcact		
				aatgatggaa ccgtctgtat agaaaatgtg aatgcaaact gccatttaga taatgtctgt		
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				tatatagaaa tattagctga atcatcttca ttactaggtt acaagaacaa cactatctca		
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				gttcaaaggg atacatttgt agtttgggac aagttatctg tgaatcatag gagaacacat		
				cttacaaaac tcatgcacac tgttgaacaa gctactttaa ggatatccca gagcttccaa		
				aagaccacag agtttgatac aaattcaacg gatatagctc tcaaagtttt cttttttgat		
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439	56923	Muscarinic acetylcholine Receptor M3	NM_000740	atgaccttgc acaataacag tacaacctcg cctttgtttc caaacatcag ctcctcctgg atacacagcc cctccgatgc agggctgccc ccgggaaccg tcactcattt cggcagctac aatgtttctc gagcagctgg caatttctcc tctccagacg gtaccaccga tgaccctctg ggaggtcata ccgtctggca agtggtcttc atcgctttct taacgggcat cctggccttg gtgaccatca tcggcaacat cctggtaatt gtgtcattta aggtcaacaa gcagctgaag	A	Homo sapiens

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443	73584	Cadherin EGF LAG Seven-Pass G-Type Receptor 1 (CELSR1/Flamingo)	NM_014246	atggcgccgc cgccgccgcc cgtgctgccc gtgctgctgc tcctggccgc cgccgccgcc ctgccggcga tggggctgcg agcggccgcc tgggagccgc gcgtacccgg cgggacccgc gccttcgccc tccggcccgg ctgtacctac gcggtgggcg ccgcttgcac gccccgggcg ccgcgggagc tgctggacgt gggccgcgat gggcggctgg caggacgtcg gcgcgtctcg ggcgcggggc gcccgctgcc gctgcaagtc cgcttggtgg cccgcagtgc cccgacggcg ctgagccgcc gcctgcgggc gcgcacgcac cttcccggct gcggagcccg tgcccggctc tgcggaaccg gtgcccggct ctgcggggcg ctctgcttcc ccgtccccgg cggctgcgcg gccgcgcagc attcggcgct cgcagctccg accaccttac ccgcctgccg ctgcccgccg cgccccaggc cccgctgtcc cggccgtccc atctgcctgc cgccgggcgg ctcggtccgc ctgcgtctgc tgtgcgccct gcggcgcgcg gctggcgccg tccgggtggg actggcgctg gaggccgcca ccgcggggac gccctccgcg tcgccatccc catcgccgcc cctgccgccg aacttgcccg aagcccgggc ggggccggcg cgacgggccc ggcggggcac gagcggcaga gggagcctga agtttccgat gcccaactac caggtggcgt tgtttgagaa cgaaccggcg ggcaccctca tcctccagct gcacgcgcac tacaccatcg agggcgagga ggagcgcgtg agctattaca tggaggggct gttcgacgag cgctcccggg gctacttccg aatcgactct gccacgggcg ccgtgagcac ggacagcgta ctggaccgcg agaccaagga gacgcacgtc ctcagggtga aagccgtgga ctacagtacg ccgccgcgct cggccaccac ctacatcact gtcttggtca aagacaccaa cgaccacagc ccggtcttcg agcagtcgga gtaccgcgag cgcgtgcggg agaacctgga ggtgggctac gaggtgctga ccatccgcgc cagcgaccgc gactcgccca tcaacgccaa cttgcgttac cgcgtgttgg ggggcgcgtg ggacgtcttc cagctcaacg agagctctgg cgtggtgagc acacgggcgg tgctggaccg ggaggaggcg gccgagtacc agctcctggt ggaggccaac gaccaggggc gcaatccggg cccgctcagt gccacggcca ccgtgtacat cgaggtggag gacgagaacg acaactaccc ccagttcagc gagcagaact acgtggtcca ggtgcccgag gacgtggggc tcaacacggc tgtgctgcga gtgcaggcca cggaccggga ccagggccag aacgcggcca ttcactacag catcctcagc gggaacgtgg ccggccagtt ctacctgcac tcgctgagcg ggatcctgga tgtgatcaac cccttggatt tcgaggatgt ccagaaatac tcgctgagca ttaaggccca ggatgggggc cggcccccgc tcatcaattc ttcaggggtg gtgtctgtgc aggtgctgga tgtcaacgac aacgagccta tctttgtgag cagccccttc caggccacgg tgctggagaa tgtgcccctg ggctaccccg tggtgcacat tcaggcggtg gacgcggact ctggagagaa cgcccggctg cactatcgcc tggtggacac ggcctccacc tttctggggg gcggcagcgc tgggcctaag aatcctgccc ccacccctga cttccccttc cagatccaca acagctccgg ttggatcaca gtgtgtgccg agctggaccg cgaggaggtg gagcactaca gcttcggggt ggaggcggtg gaccacggct cgccccccat gagctcctcc accagcgtgt ccatcacggt gctggacgtg	A	Homo sapiens

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444	73584	Cadherin EGF LAG Seven-Pass G-Type Receptor 1 (CELSR1/Flamingo)	NP_055061.1	MAPPPPPVLP VLLLLAAAAA LPAMGLRAAA WEPRVPGGTR AFALRPGCTY AVGAACTPRA PRELLDVGRD GRLAGRRRVS GAGRPLPLQV RLVARSAPTA LSRRLRARTH LPGCGARARL CGTGARLCGA LCFPVPGGCA AAQHSALAAP TTLPACRCPP RPRPRCPGRP ICLPPGGSVR LRLLCALRRA AGAVRVGLAL EAATAGTPSA SPSPSPPLPP NLPEARAGPA RRARRGTSGR GSLKFPMPNY QVALFENEPA GTLILQLHAH YTIEGEEERV SYYMEGLFDE RSRGYFRIDS ATGAVSTDSV LDRETKETHV LRVKAVDYST PPRSATTYIT VLVKDTNDHS PVFEQSEYRE RVRENLEVGY EVLTIRASDR DSPINANLRY RVLGGAWDVF QLNESSGVVS TRAVLDREEA AEYQLLVEAN DQGRNPGPLS ATATVYIEVE DENDNYPQFS EQNYVVQVPE DVGLNTAVLR	P	Homo sapiens

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448	81765	Thromboxane A2 Receptor	NP_001051.1	MWPNGSSLGP CFRPTNITLE ERRLIASPWF AASFCVVGLA SNLLALSVLA GARQGGSHTR SSFLTFLCGL VLTDFLGLLV TGTIVVSQHA ALFEWHAVDP GCRLCRFMGV VMIFFGLSPL LLGAAMASER YLGITRPFSR PAVASQRRAW ATVGLVWAAA LALGLLPLLG VGRYTVQYPG SWCFLTLGAE SGDVAFGLLF SMLGGLSVGL SFLLNTVSVA TLCHVYHGQE AAQQRPRDSE VEMMAQLLGI MVVASVCWLP LLVFIAQTVL RNPPAMSPAG QLSRTTEKEL LIYLRVATWN QILDPWVYIL FRRAVLRRLQ PRLSTRPRSL SLQPQLTQRS GLQ	P	Homo sapiens

449	98519	Chemokine (C motif) XC Receptor 1 (CCXCR1)	NM_005283	atggagtcct caggcaaccc agagagcacc accttttttt actatgacct tcagagccag ccgtgtgaga accaggcctg ggtctttgct accctcgcca ccactgtcct gtactgcctg gtgtttctcc tcagcctagt gggcaacagc ctggtcctgt gggtcctggt gaagtatgag agcctggagt ccctcaccaa catcttcatc ctcaacctgt gcctctcaga cctggtgttc gcctgcttgt tgcctgtgtg gatctcccca taccactggg gctgggtgct gggagacttc ctctgcaaac tcctcaatat gatcttctcc atcagcctct acagcagcat cttcttcctg accatcatga ccatccaccg ctacctgtcg gtagtgagcc ccctctccac cctgcgcgtc cccaccctcc gctgccgggt gctggtgacc atggctgtgt gggtagccag catcctgtcc tccatcctcg acaccatctt ccacaaggtg ctttcttcgg gctgtgatta ttccgaactc acgtggtacc tcacctccgt ctaccagcac aacctcttct tcctgctgtc cctggggatt atcctgttct gctacgtgga gatcctcagg accctgttcc gctcacgctc caagcggcgc caccgcacgg tcaagctcat cttcgccatc gtggtggcct acttcctcag ctggggtccc tacaacttca ccctgtttct gcagacgctg tttcggaccc agatcatccg gagctgcgag gccaaacagc agctagaata cgccctgctc atctgccgca acctcgcctt ctcccactgc tgctttaacc cggtgctcta tgtcttcgtg gggtcaagt tccgcacaca cctgaaacat gttctccggc agttctggtt ctgccggctg caggcaccca gcccagcctc gatcccccac tcccctggtg ccttcgccta tgagggcgcc tccttctact ga	A	Homo sapiens
450	98519	Chemokine (C motif) XC Receptor 1 (CCXCR1)	NP_005274.1	MESSGNPEST TFFYYDLQSQ PCENQAWVFA TLATTVLYCL VFLLSLVGNS LVLWVLVKYE SLESLTNIFI LNLCLSDLVF ACLLPVWISP YHWGWVLGDF LCKLLNMIFS ISLYSSIFFL TIMTIHRYLS VVSPLSTLRV PTLRCRVLVT MAVWVASILS SILDTIFHKV LSSGCDYSEL TWYLTSVYQH NLFFLLSLGI ILFCYVEILR TLFRSRSKRR HRTVKLIFAI VVAYFLSWGP YNFTLFLQTL FRTQIIRSCE AKQQLEYALL ICRNLAFSHC CFNPVLYVFV GVKFRTHLKH VLRQFWFCRL QAPSPASIPH SPGAFAYEGA SFY	P	Homo sapiens
451	130108	G Protein-Coupled Receptor GPR75	NM_006794	gcgatggcga tgatgcctct agtcctgcat catccagagc ggcaggcgag ctggggtccg gactgcgaga tggaggaggg gcgcgctgcg gcacccggca ggcttatctg tcttgggcct cttttgtcac atattgctca tctgtgagct gaggccctga ctcactgagt atttttgggg agcagaagaa ggagacattt ctctccgaaa atgaactcaa caggccacct tcaggatgcc cccaatgcca cctcgctcca tgtgcctcac tcacaggaag gaaacagcac ctctctccag gagggtcttc aggatctcat ccacacagcc accttggtga cctgtacttt tctactggcg gtcatcttct gcctgggttc ctatggcaac ttcattgtct tcttgtcctt cttcgatcca gccttcagga aattcagaac caactttgat ttcatgatcc tgaacctgtc cttctgtgac ctcttcattt gtggagtgac agccccccatg ttcacctttg tgttattctt cagctcagcc agtagtatcc cggatgcttt ctgcttcact ttccatctca ccagttcagg cttcatcatc atgtctctga agacagtggc agtgatcgcc ctgcaccggc tccggatggt gttggggaaa cagcctaatc gcacggcctc ctttccctgc accgtactcc tcaccctgct tctctgggcc accagtttca cccttgccac cttggctacc ttgaaaacca gcaagtccca cctctgtctt cccatgtcca gtctgattgc tggaaaaggg aaagccattt tgtctctcta tgtggtcgac ttcaccttct gtgttgctgt ggtctctgtc tcttacatca tgattgctca gaccctgcgg aagaacgctc aagtcagaaa gtgccccccct gtaatcacag tcgatgcttc cagaccacag cctttcatgg gggtccctgt gcagggaggt ggagatccca tccagtgtgc catgccggct ctgtatagga accagaatta caacaaactg cagcacgttc agacccgtgg atataccaag	A	Homo sapiens

				agtcccaacc aactggtcac ccctgcagca agccgactcc agctcgtatc agccatcaac ctctccactg ccaaggattc caaagccgtg gtcacctgtg tgatcattgt gctgtcagtc ctggtgtgct gtcttccact ggggatttcc ttggtacagg tggttctctc cagcaatggg agcttcattc tttaccagtt tgaattgttt ggatttactc ttatattttt caagtcagga ttaaaccctt ttatatattc tcggaacagt gcagggctga gaaggaaagt gctctggtgc ctccaataca taggcctggg tttttctgc tgcaaacaaa agactcgact tcgagccatg ggaaaaggga acctcgaagt caacagaaac aaatcctccc atcatgaaac aaactctgcc tacatgttat ctccaaagcc acagaagaaa tttgtggacc aggcttgtgg cccaagtcat tcaaaagaaa gtatggtgag tcccaagatc tctgctggac atcaacactg tggtcagagc agctcgaccc ccatcaacac tcggattgaa ccttactaca gcatctataa cagcagccct tcccaggagg agagcagccc atgtaactta cagccagtaa actcttttgg atttgccaat tcatatattg ccatgcatta tcacaccact aatgacttag tgcaggaata tgacagcact tcagccaagc agattccagt cccctccgtt taaagtcatg gaggctatag gatcttatgt aaacagtttt tgtttctgat agtaatggac tttattctaa cttgagatca gtggcggatc aaaacctaca agattcaact gaaaagttgg cagttatggt tttctttcat ctgatgtgtc agtatctgtt gatttgcttt gtagtttgtt gacatcttaa gatttgatgt gaaagtttta gattttttac cctg		
452	130108	G Protein-Coupled Receptor GPR75	NP_006785.1	MNSTGHLQDA PNATSLHVPH SQEGNSTSLQ EGLQDLIHTA TLVTCTFLLA VIFCLGSYGN FIVFLSFFDP AFRKFRTNFD FMILNLSFCD LFICGVTAPM FTFVLFFSSA SSIPDAFCFT FHLTSSGFII MSLKTVAVIA LHRLRMVLGK QPNRTASFPC TVLLTLLLWA TSFTLATLAT LKTSKSHLCL PMSSLIAGKG KAILSLYVVD FTFCVAVVSV SYIMIAQTLR KNAQVRKCPP VITVDASRPQ PFMGVPVQGG GDPIQCAMPA LYRNQNYNKL QHVQTRGYTK SPNQLVTPAA SRLQLVSAIN LSTAKDSKAV VTCVIIVLSV LVCCLPLGIS LVQVVLSSNG SFILYQFELF GFTLIFFKSG LNPFIYSRNS AGLRRKVLWC LQYIGLGFFC CKQKTRLRAM GKGNLEVNRN KSSHHETNSA YMLSPKPQKK FVDQACGPSH SKESMVSPKI SAGHQHCGQS SSTPINTRIE PYYSIYNSSP SQEESSPCNL QPVNSFGFAN SYIAMHYHTT NDLVQEYDST SAKQIPVPSV	P	Homo sapiens
453	133117	G Protein-Coupled Receptor RAIG1	NM_003979	ataacagcat gaagtgccgt ggaactggaa taggcgtgtc ctctccctcg accctccccc tccttgtccc tctgctcacc cctcgctcgt tccctccctc cggcgagggc cgcctttata acaactgctc agagtgcgag ggcgggatag ctgtccaagg tctcccccag cactgaggag ctcgcctgct gccctcttgc gcgcgggaag cagcaccaag ttcacggcca acgccttggc actagggtcc agaatggcta caacagtccc tgatggttgc cgcaatggcc tgaaatccaa gtactacaga ctttgtgata aggctgaagc ttggggcatc gtcctagaaa cggtggccac agccggggtt gtgacctcgg tggccttcat gctcactctc ccgatcctcg tctgcaaggt gcaggactcc aacaggcgaa aaatgctgcc tactcagttt ctcttcctcc tgggtgtgtt gggcatcttt ggcctcacct tcgccttcat catcggactg gacgggagca cagggcccac acgcttcttc ctctttggga tcctcttttc catctgcttc tcctgcctgc tggctcatgc tgtcagtctg accaagctcg tccgggggag gaagcccctt tccctgttgg tgattctggg tctggccgtg ggcttcagcc tagtccagga tgttatcgct attgaatata ttgtcctgac catgaatagg accaacgtca atgtcttttc tgagctttcc gctcctcgtc gcaatgaaga ctttgtcctc ctgctcacct acgtcctctt cttgatggcg ctgaccttcc tcatgtcctc cttcaccttc tgtggttcct tcacgggctg gaagagacat ggggcccaca tctacctcac	A	Homo sapiens

				gatgctcctc tccattgcca tctgggtggc ctggatcacc ctgctcatgc ttcctgactt tgaccgcagg tgggatgaca ccatcctcag ctccgccttg gctgccaatg gctgggtgtt cctgttggct tatgttagtc ccgagttttg gctgctcaca aagcaacgaa accccatgga ttatcctgtt gaggatgctt tctgtaaacc tcaactcgtg aagaagagct atggtgtgga gaacagagcc tactctcaag aggaaatcac tcaaggtttt gaagagacag gggacacgct ctatgccccc tattccacac attttcagct gcagaaccag cctccccaaa aggaattctc catcccacgg gcccacgctt ggccgagccc ttacaaagac tatgaagtaa agaaagaggg cagctaactc tgtcctgaag agtgggacaa atgcagccgg gcggcagatc tagcgggagc tcaaagggat gtgggcgaaa tcttgagtct tctgagaaaa ctgtacaaga cactacggga acagtttgcc tccctcccag cctcaaccac aattcttcca tgctggggct gatgtgggct agtaagactc cagttcttag aggcgctgta gtattttttt tttttgtct catcctttgg atacttcttt taagtgggag tctcaggcaa ctcaagttta gacccttact ctttttgttt gtttttgaa acaggatctt gctctgtcac ccaggcttga gtgcagtggt gcgatcacag cccagtgcag cctcgaccac ctgtgctcaa gcaatcctcc catctccatc tcccaaagtg ctgggatgac aggcgtgagc cacagctccc agcctaggcc cttaatcttg ctgttatttt ccatggacta aaggtctggt catctgagct cacgctggct cacacagctc taggggcctg ctcctctaac tcacagtggg ttttgtgagg ctctgtggcc cagagcagac ctgcatatct gagcaaaaat agcaaaagcc tctctcagcc cactggcctg aatctacact ggaagccaac ttgctggcac ccccgctccc caacccttct tgcctgggta ggagaggcta aagatcaccc taaatttact catctctcta gtgctgcctc acattgggcc tcagcagctc cccagcacca attcacaggt cacccctctc ttcttgcact gtccccaaac ttgctgtcaa ttccgagatc taatctcccc ctacgctctg ccaggaattc tttcagacct cactagcaca agcccggttg ctccttgtca ggagaatttg tagatcattc tcacttcaaa ttcctggggc tgatacttct ctcatcttgc accccaacct ctgtaaatag atttaccgca tttacggctg cattctgtaa gtgggcatgg tctcctaatg gaggagtgtt cattgtataa taagttattc acctgagtat gcaataaaga tgtggtggcc actctttcat ggtggtggca gcaaaaaaaa aaaaaa		
454	133117	G Protein-Coupled Receptor RAIG1	NP_003970.1	MATTVPDGCR NGLKSKYYRL CDKAEAWGIV LETVATAGVV TSVAFMLTLP ILVCKVQDSN RRKMLPTQFL FLLGVLGIFG LTFAFIIGLD GSTGPTRFFL FGILFSICFS CLLAHAVSLT KLVRGRKPLS LLVILGLAVG FSLVQDVIAI EYIVLTMNRT NVNVFSELSA PRRNEDFVLL LTYVLFLMAL TFLMSSFTFC GSFTGWKRHG AHIYLTMLLS IAIWVAWITL LMLPDFDRRW DDTILSSALA ANGWVFLLAY VSPEFWLLTK QRNPMDYPVE DAFCKPQLVK KSYGVENRAY SQEEITQGFE ETGDTLYAPY STHFQLQNQP PQKEFSIPRA HAWPSPYKDY EVKKEGS	P	Homo sapiens
455	152198	Tachykinin Receptor 2	NM_001057	atggggacct gtgacattgt gactgaagcc aatatctcat ctggccctga gagcaacacc acgggcatca cagccttctc catgcccagc tggcagctgg cactgtgggc accagcctac ctggccctgg tgctggtggc cgtgacgggt aatgccatcg tcatctggat catcctggcc catcggagga tgcgcacagt caccaactac ttcatcgtca atctggcgct ggctgacctc tgcatggctg ccttcaatgc cgccttcaac tttgtctatg ccagccacaa catctggtac tttggccgtg ccttctgcta cttccagaac ctcttcccca tcacagccat gtttgtcagc atctactcca tgaccgccat tgctgccgac aggtacatgg ccatcgtcca cccettccag cctcggcttt cagctcccag caccaaggcg gttattgctg gcatctggct ggtggctctc gccctggcct cccctcagtg cttctactcc accgtcacca tggaccaggg tgccaccaag	A	Homo sapiens

				tgcgtggtgg cctggcccga agacagcggg ggcaagacgc tcctcctgta ccacctcgtg		
				gtgatcgccc tcatctactt cctgccgctc gcggtgatgt ttgtagccta cagcgtcatc		
				ggcctcacgc tctggaggcg cgcagtgccc ggacatcagg cgcacggtgc caacctccgc		
				catctgcagg ccaagaagaa gtttgtgaag accatggtgc tggtggtgct gacgtttgcc		
				atctgctggc tgccctacca cctctacttc atcctgggca gcttccagga ggacatctac		
				tgccacaagt tcatccagca agtctacctg gcactcttct ggttggccat gagctctacc		
				atgtacaatc ccatcatcta ctgctgtctc aaccacaggt ttcgctctgg gttccggctt		
				gccttccgct gctgcccatg ggtcacaccc accaaggaag ataagctcga gctgactccc		
				acgacctccc tctccacgag agtcaacagg tgtcacacta aggagacttt gttcatggct		
				ggggacacag ccccctccga ggctaccagt ggggaggcgg ggcgtcccca ggatggatca		
				gggctatggt ttgggtatgg tttgcttgcc cccaccaaaa ctcatgttga aatttga		
456	152198	Tachykinin Receptor 2	NP_001048.1	MGTCDIVTEA NISSGPESNT TGITAFSMPS WQLALWAPAY LALVLVAVTG NAIVIWIILA	P	Homo sapiens
				HRRMRTVTNY FIVNLALADL CMAAFNAAFN FVYASHNIWY FGRAFCYFQN LFPITAMFVS		
				IYSMTAIAAD RYMAIVHPFQ PRLSAPSTKA VIAGIWLVAL ALASPQCFYS TVTMDQGATK		
				CVVAWPEDSG GKTLLLYHLV VIALIYFLPL AVMFVAYSVI GLTLWRRAVP GHQAHGANLR		
				HLQAKKKFVK TMVLVVLTFA ICWLPYHLYF ILGSFQEDIY CHKFIQQVYL ALFWLAMSST		
				MYNPIIYCCL NHRFRSGFRL AFRCCPWVTP TKEDKLELTP TTSLSTRVNR CHTKETLFMA		
				GDTAPSEATS GEAGRPQDGS GLWFGYGLLA PTKTHVEI		
457	152201	Thyrotropin Receptor	NM_000369	ccgctcccgg gtctcctttt ggcctggggt aacccgaggt gcagagctga gaatgaggcg	A	Homo sapiens
				atttcggagg atggagaaat agccccgagt cccgtggaaa atgaggccgg cggacttgct		
				gcagctggtg ctgctgctcg acctgcccag ggacctgggc ggaatggggt gttcgtctcc		
				accctgcgag tgccatcagg aggaggactt cagagtcacc tgcaaggata ttcaacgcat		
				ccccagctta ccgcccagta cgcagactct gaagcttatt gagactcacc tgagaactat		
				tccaagtcat gcattttcta atctgcccaa tatttccaga atctacgtat ctatagatgt		
				gactctgcag cagctggaat cacactcctt ctacaatttg agtaaagtga ctcacataga		
				aattcggaat accaggaact taacttacat agaccctgat gccctcaaag agctccccct		
				cctaaagttc cttggcattt tcaacactgg acttaaaatg ttccctgacc tgaccaaagt		
				ttattccact gatatattct ttatacttga aattacagac aacccttaca tgacgtcaat		
				ccctgtgaat gcttttcagg gactatgcaa tgaaaccttg acactgaagc tgtacaacaa		
				tggctttact tcagtccaag gatatgcttt caatgggaca aagctggatg ctgtttacct		
				aaacaagaat aaatacctga cagttattga caaagatgca tttggaggag tatacagtgg		
				accaagcttg ctggacgtgt ctcaaaccag tgtcactgcc cttccatcca aaggcctgga		
				gcacctgaag gaactgatag caagaaacac ctggactctt aagaaacttc cactttcctt		
				gagtttcctt cacctcacac gggctgacct ttcttaccca agccactgct gtgcttttaa		
				gaatcagaag aaaatcagag gaatccttga gtccttgatg tgtaatgaga gcagtatgca		
				gagcttgcgc cagagaaaat ctgtgaatgc cttgaatagc cccctccacc aggaatatga		
				agagaatctg ggtgacagca ttgttgggta caaggaaaag tccaagttcc aggatactca		
				taacaacgct cattattacg tcttctttga agaacaagag gatgagatca ttggttttgg		
				ccaggagctc aaaaaccccc aggaagagac tctacaagct tttgacagcc attatgacta		
				caccatatgt ggggacagtg aagacatggt gtgtaccccc aagtccgatg agttcaaccc		
				gtgtgaagac ataatgggct acaagttcct gagaattgtg gtgtggttcg ttagtctgct		

				ggctctcctg ggcaatgtct ttgtcctgct tattctcctc accagccact acaaactgaa cgtccccgc tttctcatgt gcaacctggc ctttgcggat ttctgcatgg ggatgtacct gctcctcatc gcctctgtag acctctacac tcactctgag tactacaacc atgccatcga ctggcagaca ggccctgggt gcaacacggc tggtttcttc actgtctttg caagcgagtt atcggtgtat acgctgacgg tcatcaccct ggagcgctgg tatgccatca ccttcgccat gcgcctggac cggaagatcc gcctcaggca cgcatgtgcc atcatggttg gggctgggt ttgctgcttc cttctcgccc tgcttccttt ggtgggaata agtagctatg ccaaagtcag tatctgcctg cccatggaca ccgagacccc tcttgctctg gcatatattg tttttgttct gacgctcaac atagttgcct tcgtcatcgt ctgctgctgt catgtgaaga tctacatcac agtccgaaat ccgcagtaca acccagggga caaagatacc aaaattgcca agaggatggc tgtgttgatc ttcaccgact tcatatgcat ggccccaatc tcattctatg ctctgtcagc aattctgaac aagcctctca tcactgttag caactccaaa atcttgctgg tactcttcta tccacttaac tcctgtgcca atccattcct ctatgctatt ttcaccaagg ccttccagag ggatgtgttc atcctactca gcaagtttgg catctgtaaa cgccaggctc aggcataccg ggggcagagg gttcctccaa agaacagcac tgatattcag gttcaaaagg ttacccacga catgaggcag ggtctccaca acatggaaga tgtctatgaa ctgattgaaa actcccatct aaccccaaag aagcaaggcc aaatctcaga agagtatatg caaacggttt tgtaagttaa cactacacta ctcacaatgg taggggaact tacaaaataa tagtttcttg aatatgcatt ccaatcccat		
458	152201	Thyrotropin Receptor	NP_000360.1	MRPADLLQLV LLLDLPRDLG GMGCSSPPCE CHQEEDFRVT CKDIQRIPSL PPSTQTLKLI ETHLRTIPSH AFSNLPNISR IYVSIDVTLQ QLESHSFYNL SKVTHIEIRN TRNLTYIDPD ALKELPLLKF LGIFNTGLKM FPDLTKVYST DIFFILEITD NPYMTSIPVN AFQGLCNETL TLKLYNNGFT SVQGYAFNGT KLDAVYLNKN KYLTVIDKDA FGGVYSGPSL LDVSQTSVTA LPSKGLEHLK ELIARNTWTL KKLPLSLSFL HLTRADLSYP SHCCAFKNQK KIRGILESLM CNESSMQSLR QRKSVNALNS PLHQEYEENL GDSIVGYKEK SKFQDTHNNA HYYVFFEEQE DEIIGFGQEL KNPQEETLQA FDSHYDYTIC GDSEDMVCTP KSDEFNPCED IMGYKFLRIV VWFVSLLALL GNVFVLLILL TSHYKLNVPR FLMCNLAFAD FCMGMYLLLI ASVDLYTHSE YYNHAIDWQT GPGCNTAGFF TVFASELSVY TLTVITLERW YAITFAMRLD RKIRLRHACA IMVGGWVCCF LLALLPLVGI SSYAKVSICL PMDTETPLAL AYIVFVLTLN IVAFVIVCCC HVKIYITVRN PQYNPGDKDT KIAKRMAVLI FTDFICMAPI SFYALSAILN KPLITVSNSK ILLVLFYPLN SCANPFLYAI FTKAFQRDVF ILLSKFGICK RQAQAYRGQR VPPKNSTDIQ VQKVTHDMRQ GLHNMEDVYE LIENSHLTPK KQGQISEEYM QTVL	P	Homo sapiens
459	152245	C-C Chemokine Receptor 2	NM_000648	caggactgcc tgagacaagc cacaagctga acagagaaag tggattgaac aaggacgcat ttccccagta catccacaac atgctgtcca catctcgttc tcggtttatc agaaatacca acgagagcgg tgaagaagtc accacctttt ttgattatga ttacggtgct ccctgtcata aatttgacgt gaagcaaatt ggggcccaac tcctgcctcc gctctactcg ctggtgttca tctttggttt tgtgggcaac atgctggtcg tcctcatctt aataaactgc aaaaagctga agtgcttgac tgacatttac ctgctcaacc tggccatctc tgatctgctt tttcttatta ctctcccatt gtgggctcac tctgctgcaa atgagtgggt ctttgggaat gcaatgtgca aattattcac agggctgtat cacatcggtt attttggcgg aatcttcttc atcatcctcc tgacaatcga tagatacctg gctattgtcc atgctgtgtt tgctttaaaa gccaggacgg	A	Homo sapiens

				tcacctttgg ggtggtgaca agtgtgatca cctggttggt ggctgtgttt gcttctgtcc caggaatcat ctttactaaa tgccagaaag aagattctgt ttatgtctgt ggcccttatt ttccacgagg atggaataat ttccacacaa taatgaggaa cattttgggg ctggtcctgc cgctgctcat catggtcatc tgctactcgg gaatcctgaa aaccctgctt cggtgtcgaa acgagaagaa gaggcatagg gcagtgagag tcatcttcac catcatgatt gtttactttc tcttctggac tccctataac attgtcattc tcctgaacac cttccaggaa ttcttcggcc tgagtaactg tgaaagcacc agtcaactgg accaagccac gcaggtgaca gagactcttg ggatgactca ctgctgcatc aatcccatca tctatgcctt cgttggggag aagttcagaa ggtatctctc ggtgttcttc cgaaagcaca tcaccaagcg cttctgcaaa caatgtccag ttttctacag ggagacagtg gatggagtga cttcaacaaa cacgccttcc actggggagc aggaagtctc ggctggttta taaaacgagg agcagtttga ttgttgttta taaagggaga taacaatctg tatataacaa caaacttcaa gggtttgttg aacaatagaa acctgtaaag caggtgccca ggaacctcag ggctgtgtgt actaatacag actatgtcac ccaatgcata tccaacatgt gctcagggaa taatccagaa aaactgtggg tagagacttt gactctccag aaagctcatc tcagctcctg aaaaatgcct cattaccttg tgctaatcct ctttttctag tcttcataat ttcttcactc aatctctgat tctgtcaatg tcttgaaatc aagggccagc tggaggtgaa gaagagaatg tgacaggcac agatgaatgg gagtgaggga tagtggggtc agggctgaga ggagaaggag ggagacatga gcatggctga gcctggacaa agacaaaggt gagcaaaggg ctcacgcatt cagccaggag atgatactgg tccttagccc catctgccac gtgtatttaa ccttgaaggg ttcaccaggt cagggagagt ttgggaactg caataacctg ggagttttgg tggagtccga tgattctctt ttgcataagt gcatgacata tttttgcttt attacagttt atctatggca cccatgcacc ttacatttga aatctatgaa atatcatgct ccattgttca gatgcttctt aggccacatc cccctgtcta aaaattcaga aaatttttgt ttataaaaga tgcattatct atgatatgct aatatatgta tatgcaatat aaaatttag		
460	152245	C-C Chemokine Receptor 2	NP_000639.1	MLSTSRSRFI RNTNESGEEV TTFFDYDYGA PCHKFDVKQI GAQLLPPLYS LVFIFGFVGN MLVVLILINC KKLKCLTDIY LLNLAISDLL FLITLPLWAH SAANEWVFGN AMCKLFTGLY HIGYFGGIFF IILLTIDRYL AIVHAVFALK ARTVTFGVVT SVITWLVAVF ASVPGIIFTK CQKEDSVYVC GPYFPRGWNN FHTIMRNILG LVLPLLIMVI CYSGILKTLL RCRNEKKRHR AVRVIFTIMI VYFLFWTPYN IVILLNTFQE FFGLSNCEST SQLDQATQVT ETLGMTHCCI NPIIYAFVGE KFRRYLSVFF RKHITKRFCK QCPVFYRETV DGVTSTNTPS TGEQEVSAGL	P	Homo sapiens
461	152299	Interleukin-8 Receptor A	LG5459	CAGAAATCCT CAGGTCCCAC AGAAATGAAC ACGTTTTCTA AAATAAAGTC AAGCCAAGCT GTCCTACCCC AAAGAAAATC CTAGCAAGCA AAGGTGGCTT CCTTCCTGAG GCCCCAGCCA GGTGTGTCCA ACCGTAGGAG CCACAGCTCA GAGATCAGAG TGACTTAACA GTTAGAGGGC ACTTGATGAG TAAGGTGAAA TAGGGAAACC AAGTCAGACG ACACCTCCCT TCTGAGTCCC AACCATGTCT ACATCTGGAG AAGAACAGTT AAGTCAAGGG ATCACAGACT TGTGATTAGA GACTGCCAGG GTCCATATGA CCAAGCGGGG GTCCCAGGTG TGAAGCTGGG GTTGAGGATC CATTATCTGA ATTTTCCACT CTATGGATGA TCACTTTTAT TCTTTTCCTT TTCTTGAATT TATTTCCATT TGTTTATTCC TAAATTCCCT GGTAGATCAC CTGTGAAAGC TTGCAACTGT CTGATAAGAA TAAAGGGGGA AGGATTTGAC TTTACAGCAG AGACTTCAGA AGGAGTCCTC TCTAGGAGCA AATTGGGGGC AATCCAGTGG GAAGGAGGTG GAAGACTGCA CTTGAGCTGC GTTTGGACAA CAGGCACACA ATCTTTACTT ACTTTTCAGG CTGCTTTGAG GT	A	Homo sapiens

462	152299	Interleukin-8 Receptor A	NM_000634	agctgttaag tcactctgat ctctgactgc agctcctact gttggacaca cctggccggt A gcttcagtta gatcaaacca ttgctgaaac tgaagaggac atgtcaaata ttacagatcc acagatgtgg gattttgatg atctaaattt cactggcatg ccacctgcag atgaagatta cagcccctgt atgctagaaa ctgagacact caacaagtat gttgtgatca tcgcctatgc cctagtgttc ctgctgagcc tgctgggaaa ctccctggtg atgctggtca tcttatacag cagggtcggc cgctccgtca ctgatgtcta cctgctgaac ctggccttgg ccgacctact ctttgccctg accttgccca tctgggccgc ctccaaggtg aatggctgga tttttggcac attcctgtgc aaggtggtct cactcctgaa ggaagtcaac ttctacagtg gcatcctgct gttggcctgc atcagtgtgg accgttacct ggccattgtc catgccacac gcacactgac ccagaagcgt cacttggtca agtttgtttg tcttggctgc tggggactgt ctatgaatct gtccctgccc ttcttccttt tccgccaggc ttaccatcca aacaattcca gtccagtttg ctatgaggtc ctgggaaatg acacagcaaa atggcggatg gtgttgcgga tcctgcctca cacctttggc ttcatcgtgc cgctgtttgt catgctgttc tgctatggat tcaccctgcg tacactgttt aaggcccaca tggggcagaa gcaccgagcc atgagggtca tctttgctgt cgtcctcatc ttcctgcttt gctggctgcc ctacaacctg gtcctgctgg cagacaccct catgaggacc caggtgatcc aggagagctg tgagcgccgc aacaacatcg gccgggccct ggatgccact gagattctgg gatttctcca tagctgcctc aaccccatca tctacgcctt catcggccaa aattttcgcc atggattcct caagatcctg gctatgcatg gcctggtcag caaggagttc ttggcacgtc atcgtgttac ctcctacact tcttcgtctg tcaatgtctc ttccaacctc tgaaaaccat cgatgaagga atatctcttc tcagaaggaa agaataacca acaccctgag gttgtgtgtg gaaggtgatc tggctctgga caggcactat ctgggttttg gggggacgct ataggatgtg gggaagttag gaactggtgt cttcaggggc cacaccaacc ttctgaggag ctgttgaggt acctccaagg accggccttt gcacctccat ggaaacgaag caccatcatt cccgttgaac gtcacatctt taacccacta actggctaat tagcatggcc acatctgagc cccgaatctg acattagatg agagaacagg gctgaagctg tgtcctcatg agggctggat gctctcgttg accctcacag gagcatctcc tcaactctga gtgttaagcg ttgagccacc aagctggtgg ctctgtgtgc tctgatccga gctcaggggg gtggttttcc catctcaggt gtgttgcagt gtctgctgga gacattgagg caggcactgc caaaacatca acctgccagc tggccttgtg aggagctgga aacacatgtt ccccttgggg gtggtggatg aacaaagaga aagagggttt ggaagccaga tctatgccac aagaaccccc tttacccccca tgaccaacat cgcagacaca tgtgctggcc acctgctgag ccccaagtgg aacgagacaa gcagccctta gcccttcccc tctgcagctt ccaggctggc gtgcagcatc agcatcccta gaaagccatg tgcagccacc agtccattgg gcaggcagat gttcctaata aagcttctgt tccgtgcttg tccctgtgga agtatcttgg ttgtgacaga gtcaagggtg tgtgcagcat tgttggctgt tcctgcagta gaatgggggc agcacctcct aagaaggcac ctctctgggt tgaagggcag tgttccctgg ggctttaact cctgctagaa cagtctcttg aggcacagaa actcctgttc atgcccatac ccctggccaa ggaagatccc tttgtccaca agtaaaagga aatcctcctc cagggagtct cagcttcacc ctgaggtgag catcatcttc tgggttaggc cttgcctagg catagcctgc ctcaagctat gtgagctcac cagtccctcc ccaaatgctt tccatgagtt gcagtttttt cctagtctgt tttccctcct tggagaacag ggccctgtcg gtttgttcac tgtatgtcct tggtgcctgg agcctactaa atgctcaata aataatgatc	Homo sapiens

				acaggaatga atgcatgctg aaaagaccac tctttt		
463	152299	Interleukin-8 Receptor A	NP_000625.1	MSNITDPQMW DFDDLNFTGM PPADEDYSPC MLETETLNKY VVIIAYALVF LLSLLGNSLV MLVILYSRVG RSVTDVYLLN LALADLLFAL TLPIWAASKV NGWIFGTFLC KVVSLLKEVN FYSGILLLAC ISVDRYLAIV HATRTLTQKR HLVKFVCLGC WGLSMNLSLP FFLFRQAYHP NNSSPVCYEV LGNDTAKWRM VLRILPHTFG FIVPLFVMLF CYGFTLRTLF KAHMGQKHRA MRVIFAVVLI FLLCWLPYNL VLLADTLMRT QVIQESCERR NNIGRALDAT EILGFLHSCL NPIIYAFIGQ NFRHGFLKIL AMHGLVSKEF LARHRVTSYT SSSVNVSSNL	P	Homo sapiens
464	158822	Mas Proto-Oncogene	NM_002377	cctgaggcct cctcatggat gggtcaaacg tgacatcatt tgttgttgag gaacccacga acatctcaac tggcaggaac gcctcagtcg ggaatgcaca tcggcaaatc cccatcgtgc actgggtcat tatgagcatc tccccagtgg ggtttgttga gaatgggatt ctcctctggt tcctgtgctt ccggatgaga agaaatccct tcactgtcta catcacccac ctgtctatcg cagacatctc actgctcttc tgtattttca tcttgtctat cgactatgct ttagattatg agctttcttc tggccattac tacacaattg tcacattatc agtgactttt ctgtttggct acaacacggg cctctatctg ctgacggcca ttagtgtgga gaggtgcctg tcagtccttt accccatctg gtaccgatgc catcgcccca agtaccagtc ggcattggtc tgtgcccttc tgtgggctct ttcttgcttg gtgaccacca tggagtatgt catgtgcatc gacagagaag aagagagtca ctctcggaat gactgccgag cagtcatcat ctttatagcc atcctgagct tcctggtctt cacgcccctc atgctggtgt ccagcaccat cttggtcgtg aagatccgga agaacacgtg ggcttcccat tcctccaagc tttacatagt catcatggtc accatcatta tattcctcat cttcgctatg cccatgagac tcctttacct gctgtactat gagtattggt cgacctttgg gaacctacac cacatttccc tgctcttctc cacaatcaac agtagcgcca acccttttcat ttacttcttt gtgggaagca gtaagaagaa gagattcaag gagtccttaa aagttgttct gaccagggct ttcaaagatg aaatgcaacc tcggcgccag aaagacaatt gtaatacggt cacagttgag actgtcgtct aagaactgtg agggaagttg tggataaaaa tggtggaaca caggtcattt ttagtttgtg cttggaatat gacttaagta tctcctaaat gtgatacaga agaacatctc atcccatatg catgagatac taattaatga tgaaa	A	Homo sapiens
465	158822	Mas Proto-Oncogene	NP_002368.1	MDGSNVTSFV VEEPTNISTG RNASVGNAHR QIPIVHWVIM SISPVGFVEN GILLWFLCFR MRRNPFTVYI THLSIADISL LFCIFILSID YALDYELSSG HYYTIVTLSV TFLFGYNTGL YLLTAISVER CLSVLYPIWY RCHRPKYQSA LVCALLWALS CLVTTMEYVM CIDREEESHS RNDCRAVIIF IAILSFLVFT PLMLVSSTIL VVKIRKNTWA SHSSKLYIVI MVTIIIFLIF AMPMRLLYLL YYEYWSTFGN LHHISLLFST INSSANPFIY FFVGSSKKKR FKESLKVVLT RAFKDEMQPR RQKDNCNTVT VETVV	P	Homo sapiens
466	159152	G Protein-Coupled Receptor GPR43	NM_005306	atgctgccgg actggaagag ctccttgatc ctcatggctt acatcatcat cttcctcact ggcctccctg ccaacctcct ggccctgcgg gcctttgtgg ggcggatccg ccagccccag cctgcacctg tgcacatcct cctgctgagc ctgacgctgg ccgacctcct cctgctgctg ctgctgccct tcaagatcat cgaggctgcg tcgaacttcc gctggtacct gcccaaggtc gtctgcgccc tcacgagttt tggcttctac agcagcatct actgcagcac gtggctcctg gcgggcatca gcatcgagcg ctacctggga gtggctttcc ccgtgcagta caagctctcc cgccggcctc tgtatggagt gattgcagct ctggtggcct gggttatgtc ctttggtcac tgcaccatcg tgatcatcgt tcaatacttg aacacgactg agcaggtcag aagtggcaat	A	Homo sapiens

				gaaattacct gctacgagaa cttcaccgat aaccagttgg acgtggtgct gcccgtgcgg ctggagctgt gcctggtgct cttcttcatc cccatggcag tcaccatctt ctgctactgg cgttttgtgt ggatcatgct ctcccagccc cttgtggggg cccagaggcg gcgccgagcc gtggggctgg ctgtggtgac gctgctcaat ttcctggtgt gcttcggacc ttacaacgtg tcccacctgg tggggtatca ccagagaaaa agcccctggt ggcggtcaat agccgtggtg ttcagttcac tcaacgccag tctggacccc ctgctcttct atttctcttc ttcagtggtg cgcagggcat ttgggagagg gctgcaggtg ctgcggaatc agggctcctc cctgttggga cgcagaggca aagacacagc agaggggaca aatgaggaca ggggtgtggg tcaaggagaa gggatgccaa gttcggactt cactacagag tag		
467	159152	G Protein-Coupled Receptor GPR43	NP_005297.1	MLPDWKSSLI LMAYIIIFLT GLPANLLALR AFVGRIRQPQ PAPVHILLLS LTLADLLLLL LLPFKIIEAA SNFRWYLPKV VCALTSFGFY SSIYCSTWLL AGISIERYLG VAFPVQYKLS RRPLYGVIAA LVAWVMSFGH CTIVIIVQYL NTTEQVRSGN EITCYENFTD NQLDVVLPVR LELCLVLFFI PMAVTIFCYW RFVWIMLSQP LVGAQRRRRA VGLAVVTLLN FLVCFGPYNV SHLVGYHQRK SPWWRSIAVV FSSLNASLDP LLFYFSSSVV RRAFGRGLQV LRNQGSSLLG RRGKDTAEGT NEDRGVGQGE GMPSSDFTTE	P	Homo sapiens
468	159973	Vasoactive Intestinal Polypeptide Receptor 1	NM_004624	ggccacaggc cagcgccact ctgccaggct cccggccatc gcccgcctgg tgcgccgccc gccagctctt tgcccgcgcg gggccgcccg ccgcgggctc agggcagacc atgcgcccgc caagtccgct gcccgcccgc tggctatgcg tgctggcagg cgccctcgcc tgggcccttg ggccggcggg cggccaggcg gccaggctgc aggaggagtg tgactatgtg cagatgatcg aggtgcagca caagcagtgc ctggaggagg cccagctgga gaatgagaca ataggctgca gcaagatgtg ggacaacctc acctgctggc cagccacccc tcggggccag gtagttgtct tggcctgtcc cctcatcttc aagctcttct cctccattca aggccgcaat gtaagccgca gctgcaccga cgaaggctgg acgcacctgg agcctggccc gtaccccatt gcctgtggtt tggatgacaa ggcagcgagt ttggatgagc agcagaccat gttctacggt tctgtgaaga ccggctacac cattggctac ggcctgtccc tcgccaccct tctggtcgcc acagctatcc tgagcctgtt caggaagctc cactgcacgc ggaactacat ccacatgcac ctcttcatat ccttcatcct gagggctgcc gctgtcttca tcaaagactt ggccctcttc gacagcgggg agtcggacca gtgctccgag ggctcggtgg gctgtaaggc agccatggtc tttttccaat attgtgtcat ggctaacttc ttctggctgc tggtggaggg cctctacctg tacaccctgc ttgccgtctc cttcttctct gagcggaagt acttctgggg gtacatactc atcggctggg gggtacccag cacattcacc atggtgtgga ccatcgccag gatccatttt gaggattatg ggtgctggga caccatcaac tcctcactgt ggtggatcat aaagggcccc atcctcacct ccatcttggt aaacttcatc ctgtttattt gcatcatccg aatcctgctt cagaaactgc ggcccccaga tatcaggaag agtgacagca gtccatactc aaggctagcc aggtccacac tcctgctgat ccccctgttt ggagtacact acatcatgtt cgccttcttt ccggacaatt ttaagcctga agtgaagatg gtctttgagc tcgtcgtggg gtctttccag ggttttgtgg tggctatcct ctactgcttc ctcaatggtg aggtgcaggc ggagctgagg cggaagtggc ggcgctggca cctgcagggc gtcctgggct ggaaccccaa ataccggcac ccgtcgggag gcagcaacgg cgccacgtgc agcacgcagg tttccatgct gacccgcgtc agcccaggtg cccgccgctc ctccagcttc caagccgaag tctccctggt ctgaccacca ggatcccagg ggcccaaggc ggcccctccc gccccttccc actcaccccg gcagacgccg gggacagagg	A	Homo sapiens

				cctgcccggg cgcggccagc cccggccctg ggctcggagg ctgcccccgg cccccctggtc tctggtccgg acactcctag agaacgcagc cctagagcct gcctggagcg tttctagcaa gtgagagaga tgggagctcc tctcctggag gattgcaggt ggaactcagt cattagactc ctcctccaaa ggccccctac gccaatcaag ggcaaaaagt ctacatactt tcatcctgac tctgcccccct gctggctctt ctgcccaatt ggaggaaagc aaccggtgga tcctcaaaca acactggtgt gacctgaggg cagaaaggtt ctgcccgggg aaggtcacca gcaccaacac cacggtagtg cctgaaattt caccattgct gtcaagttcc tttgggttaa gcattaccac tcaggcattt gactgaagat gcagctcact accctattct ctctttacgc ttagttatca gctttttaaa gtgggttatt ctggagtttt tgtttggaga gcacacctat cttagtggtt ccccaccgaa gtggactggc ccctgggtca gtctggtggg aggacggtgc aacccaagga ctgagggact ctgaagcctc tgggaaatga gaaggcagcc accagcgaat gctaggtctc ggactaagcc tacctgctct ccaagtctca gtggcttcat ctgtcaagtg ggatctgtca caccagccat acttatctct ctgtgctgtg gaagcaacag gaatcaagag ctgccctcct tgtccaccca cctatgtgcc aactgttgta actaggctca gagatgtgca cccatgggct ctgacagaaa gcagatacct caccctgcta cacatacagg atttgaactc agatctgtct gataggaatg tgaaagcacg gactcttact gctaactttt gtgtatcgta accagccaga tcctcttggt tatttgttta ccacttgtat tattaatgcc attatcctga attcccccttg ccacccccacc ctccctggcg tgtggctgag gaggcctcca tctcatgtat catctggata ggagcctgct ggtcacagcc tcctctgtct gcccttcacc ccagtggcca ctcagcttcc tacccacacc tctgccagaa gatcccctca ggactgcaac aggcttgtgc aacaataaat gttggcttgg a		
469	159973	Vasoactive Intestinal Polypeptide Receptor 1	NP_004615.2	MRPPSPLPAR WLCVLAGALA WALGPAGGQA ARLQEECDYV QMIEVQHKQC LEEAQLENET IGCSKMWDNL TCWPATPRGQ VVVLACPLIF KLFSSIQGRN VSRSCTDEGW THLEPGPYPI ACGLDDKAAS LDEQQTMFYG SVKTGYTIGY GLSLATLLVA TAILSLFRKL HCTRNYIHMH LFISFILRAA AVFIKDLALF DSGESDQCSE GSVGCKAAMV FFQYCVMANF FWLLVEGLYL YTLLAVSFFS ERKYFWGYIL IGWGVPSTFT MVWTIARIHF EDYGCWDTIN SSLWWIIKGP ILTSILVNFI LFICIIRILL QKLRPPDIRK SDSSPYSRLA RSTLLLIPLF GVHYIMFAFF PDNFKPEVKM VFELVVGSFQ GFVVAILYCF LNGEVQAELR RKWRRWHLQG VLGWNPKYRH PSGGSNGATC STQVSMLTRV SPGARRSSSF QAEVSLV	P	Homo sapiens
470	160040	Vasoactive Intestinal Polypeptide Receptor 2	NM_003382	cgggacgagg gggcggcccc cgcgctcggg gcgctcggct acagctgcgg ggcccgaggt ctccgcgcac tcgctcccgg cccatgctgg aggcggcgga acccggggga cctaggacgg aggcggcggg cgctgggcgg cccccggcac gctgagctcg ggatgcggac gctgctgcct cccgcgctgc tgacctgctg gctgctcgcc cccgtgaaca gcattcaccc agaatgccga tttcatctgg aaatacagga ggaagaaaca aaatgtacag agcttctgag gtctcaaaca gaaaaacaca aagcctgcag tggcgtctgg gacaacatca cgtgctggcg gcctgccaat gtgggagaga ccgtcacggt gccctgccca aaagtcttca gcaattttta cagcaaagca ggaaacataa gcaaaaactg tacgagtgac ggatggtcag agacgttccc agatttcgtc gatgcctgtg gctacagcga cccggaggat gagagcaaga tcacgtttta tattctggtg aaggccattt ataccctggg ctacagtgtc tctctgatgt ctcttgcaac aggaagcata attctgtgcc tcttcaggaa gctgcactgc accaggaatt acatccacct gaacctgttc ctgtccttca tcctgagagc catctcagtg ctggtcaagg acgacgttct ctactccagc	A	Homo sapiens

				tctggcacgt tgcactgccc tgaccagcca tcctcctggg tgggctgcaa gctgagcctg gtcttcctgc agtactgcat catggccaac ttcttctggc tgctggtgga ggggctctac ctccacaccc tcctggtggc catgctcccc cctagaaggt gcttcctggc ctacctcctg atcggatggg gcctccccac cgtctgcatc ggtgcatgga ctgcggccag gctctactta gaagacaccg gttgctggga tacaaacgac cacagtgtgc cctggtgggt catacgaata ccgattttaa tttccatcat cgtcaatttt gtccttttca ttagtattat acgaattttg ctgcagaagt taacatcccc agatgtcggc ggcaacgacc agtctcagta caagaggctg gccaagtcca cgctcctgct tatcccgctg ttcggcgtcc actacatggt gtttgccgtg tttcccatca gcatctcctc caaataccag atactgtttg agctgtgcct cgggtcgttc cagggcctgg tggtggccgt cctctactgt ttcctgaaca gtgaggtgca gtgcgagctg aagcgaaaat ggcgaagccg gtgcccgacc ccgtccgcga gccgggatta cagggtctgc ggttcctcct tctcccacaa cggctcggag ggcgccctgc agttccaccg cgcgtcccga gcccagtcct tcctgcaaac ggagacctcg gtcatctagc cccacccctg cctgtcggac gcggcgggag gcccacggtt cggggcttct gcggggctga gacgccggct tcctccttcc agatgcccga gcaccgtgtc gggcaggtca gcgcggtcct gactccgtca agctggttgt ccactaaacc ccatacctgg		
471	160040	Vasoactive Intestinal Polypeptide Receptor 2	NP_003373.1	MRTLLPPALL TCWLLAPVNS IHPECRFHLE IQEEETKCTE LLRSQTEKHK ACSGVWDNIT CWRPANVGET VTVPCPKVFS NFYSKAGNIS KNCTSDGWSE TFPDFVDACG YSDPEDESKI TFYILVKAIY TLGYSVSLMS LATGSIILCL FRKLHCTRNY IHLNLFLSFI LRAISVLVKD DVLYSSSGTL HCPDQPSSWV GCKLSLVFLQ YCIMANFFWL LVEGLYLHTL LVAMLPPRRC FLAYLLIGWG LPTVCIGAWT AARLYLEDTG CWDTNDHSVP WWVIRIPILI SIIVNFVLFI SIIRILLQKL TSPDVGGNDQ SQYKRLAKST LLLIPLFGVH YMVFAVFPIS ISSKYQILFE LCLGSFQGLV VAVLYCFLNS EVQCELKRKW RSRCPTPSAS RDYRVCGSSF SHNGSEGALQ FHRASRAQSF LQTETSVI	P	Homo sapiens
472	160055	Motilin Receptor (GPR38)	NM_001507	atgggcagcc cctggaacgg cagcgacggc cccgaggggg cgcgggagcc gccgtggccc gcgctgccgc cttgcgacga gcgccgctgc tcgccctttc ccctgggggc gctggtgccg gtgaccgctg tgtgcctgtg cctgttcgtc gtcggggtga gcggcaacgt ggtgaccgtg atgctgatcg ggcgctaccg ggacatgcgg accaccacca acttgtacct gggcagcatg gccgtgtccg acctactcat cctgctcggg ctgccgttcg acctgtaccg cctctggcgc tcgcggccct gggtgttcgg gccgctgctc tgccgcctgt ccctctacgt gggcgagggc tgcacctacg ccacgctgct gcacatgacc gcgctcagcg tcgagcgcta cctggccatc tgccgcccgc tccgcgcccg cgtcttggtc acccggcgcc gcgtccgcgc gctcatcgct gtgctctggg ccgtggcgct gctctctgcc ggtcccttct tgttcctggt gggcgtcgag caggaccccg gcatctccgt agtcccgggc ctcaatggca ccgcgcggat cgcctcctcg cctctcgcct cgtcgccgcc tctctggctc tcgcgggcgc caccgccgtc cccgccgtcg gggcccgaga ccgcggaggc cgcggcgctg ttcagccgcg aatgccggcc gagccccgcg cagctgggcg cgctgcgtgt catgctgtgg gtcaccaccg cctacttctt cctgcccttt ctgtgcctca gcatcctcta cgggctcatc gggcgggagc tgtggagcag ccggcggccg ctgcgaggcc cggccgcctc ggggcgggag agaggccacc ggcagaccgt ccgcgtcctg ctggtggtgg ttctggcatt tataatttgc tggttgccct tccacgttgg cagaatcatt tacataaaca cggaagattc gcggatgatg tacttctctc agtactttaa catcgtcgct	A	Homo sapiens

				ctgcaacttt tctatctgag cgcatctatc aacccaatcc tctacaacct catttcaaag aagtacagag cggcggcctt taaactgctg ctcgcaagga agtccaggcc gagaggcttc cacagaagca gggacactgc gggggaagtt gcaggggaca ctggaggaga cacggtgggc tacaccgaga caagcgctaa cgtgaagacg atgggataa		
473	160055	Motilin Receptor (GPR38)	NP_001498.1	MGSPWNGSDG PEGAREPPWP ALPPCDERRC SPFPLGALVP VTAVCLCLFV VGVSGNVVTV MLIGRYRDMR TTTNLYLGSM AVSDLLILLG LPFDLYRLWR SRPWVFGPLL CRLSLYVGEG CTYATLLHMT ALSVERYLAI CRPLRARVLV TRRRVRALIA VLWAVALLSA GPFLFLVGVE QDPGISVVPG LNGTARIASS PLASSPPLWL SRAPPPSPPS GPETAEAAAL FSRECRPSPA QLGALRVMLW VTTAYFFLPF LCLSILYGLI GRELWSSRRP LRGPAASGRE RGHRQTVRVL LVVVLAFIIC WLPFHVGRII YINTEDSRMM YFSQYFNIVA LQLFYLSASI NPILYNLISK KYRAAAFKLL LARKSRPRGF HRSRDTAGEV AGDTGGDTVG YTETSANVKT MG	P	Homo sapiens
474	160059	G Protein-coupled Receptor GPR40	NM_005303	atggacctgc cccgcagct ctccttcggc ctctatgtgg ccgcctttgc gctgggcttc ccgctcaacg tcctggccat ccgaggcgcg acggcccacg cccggctccg tctcacccct agcctggtct acgccctgaa cctgggctgc tccgacctgc tgctgacagt ctctctgccc ctgaaggcgg tggaggcgct agcctccggg gcctggcctc tgccggcctc gctgtgcccc gtcttcgcgg tggcccactt cttcccactc tatgccggcg gggcttcct ggccgccctg agtgcaggcc gctacctggg agcagccttc cccttgggct accaagcctt ccggaggccg tgctattcct ggggggtgtg cgcggccatc tgggccctcg tcctgtgtca cctgggtctg gtctttgggt tggaggctcc aggaggctgg ctggaccaca gcaacacctc cctgggcatc aacacaccgg tcaacggctc tccggtctgc ctggaggcct gggacccggc ctctgccggc ccggcccgct tcagcctctc tctcctgctc ttttttctgc ccttggccat cacagccttc tgctacgtgg gctgcctccg ggcactggcc cgctccggcc tgacgcacag gcggaagctg cgggccgcct gggtggccgg cggggccctc ctcacgctgc tgctctgcgt aggaccctac aacgcctcca acgtggccag cttcctgtac cccaatctag gaggctcctg gcggaagctg gggctcatca cgggtgcctg gagtgtggtg cttaatccgc tggtgaccgg ttacttggga aggggtcctg gcctgaagac agtgtgtgcg gcaagaacgc aagggggcaa gtcccagaag taa	A	Homo sapiens
475	160059	G Protein-coupled Receptor GPR40	NP_005294.1	MDLPPQLSFG LYVAAFALGF PLNVLAIRGA TAHARLRLTP SLVYALNLGC SDLLLTVSLP LKAVEALASG AWPLPASLCP VFAVAHFFPL YAGGGFLAAL SAGRYLGAAF PLGYQAFRRP CYSWGVCAAI WALVLCHLGL VFGLEAPGGW LDHSNTSLGI NTPVNGSPVC LEAWDPASAG PARFSLSLLL FFLPLAITAF CYVGCLRALA RSGLTHRRKL RAAWVAGGAL LTLLLCVGPY NASNVASFLY PNLGGSWRKL GLITGAWSVV LNPLVTGYLG RGPGLKTVCA ARTQGGKSQK	P	Homo sapiens
476	160189	G Protein-Coupled Receptor GPR54	NM_032551	atgcacaccg tggctacgtc cggacccaac gcgtcctggg gggcaccggc caacgcctcc ggctgcccgg gctgtggcgc caacgcctcg gacggcccag tcccttcgcc gcgggccgtg gacgcctggc tcgtgccgct cttcttcgcg gcgctgatgc tgctgggcct ggtggggaac tcgctggtca tctacgtcat ctgccgccac aagccgatgc ggaccgtgac caacttctac atcgccaacc tggcggccac ggacgtgacc ttcctcctgt gctgcgtccc cttcacggcc ctgctgtacc cgctgcccgg ctgggtgctg ggcgacttca tgtgcaagtt cgtcaactac atccagcagg tctcggtgca ggccacgtgt gccactctga ccgccatgag tgtggaccgc tggtacgtga cggtgttccc gttgcgcgcc ctgcaccgcc gcacgccccg cctggcgctg gctgtcagcc tcagcatctg ggtaggctct gcggcggtgt ctgcgccggt gctcgccctg	A	Homo sapiens

				caccgcctgt cacccgggcc gcgcgcctac tgcagtgagg ccttccccag ccgcgccctg gagcgcgcct tcgcactgta caacctgctg gcgctgtacc tgctgccgct gctcgccacc tgcgcctgct atgcggccat gctgcgccac ctgggccggg tcgccgtgcg ccccgcgccc gccgatagcg ccctgcaggg gcaggtgctg gcagagcgcg caggcgccgt gcgggccaag gtctcgcggc tggtggcggc cgtggtcctg ctcttcgccg cctgctgggg ccccatccag ctgttcctgg tgctgcaggc gctgggcccc gcgggctcct ggcacccacg cagctacgcc gcctacgcgc ttaagacctg ggctcactgc atgtcctaca gcaactccgc gctgaacccg ctgctctacg ccttcctggg ctcgcacttc cgacaggcct tccgccgcgt ctgcccctgc gcgccgcgcc gcccccgccg cccccgccgg cccggaccct cggaccccgc agccccacac gcggagctgc accgcctggg gtcccacccg gcccccgcca gggcgcagaa gccagggagc agtgggctgg ccgcgcgcgg gctgtgcgtc ctgggggagg acaacgcccc tctctga		
477	160189	G Protein-Coupled Receptor GPR54	NP_115940.1	MHTVATSGPN ASWGAPANAS GCPGCGANAS DGPVPSPRAV DAWLVPLFFA ALMLLGLVGN SLVIYVICRH KPMRTVTNFY IANLAATDVT FLLCCVPFTA LLYPLPGWVL GDFMCKFVNY IQQVSVQATC ATLTAMSVDR WYVTVFPLRA LHRRTPRLAL AVSLSIWVGS AAVSAPVLAL HRLSPGPRAY CSEAFPSRAL ERAFALYNLL ALYLLPLLAT CACYAAMLRH LGRVAVRPAP ADSALQGQVL AERAGAVRAK VSRLVAAVVL LFAACWGPIQ LFLVLQALGP AGSWHPRSYA AYALKTWAHC MSYSNSALNP LLYAFLGSHF RQAFRRVCPC APRRPRRPRR PGPSDPAAPH AELHRLGSHP APARAQKPGS SGLAARGLCV LGEDNAPL	P	Homo sapiens
478	160202	Adrenomedullin Receptor (ADMR)	LG6564	CCGGCGCCAC GTGCCTGCTG CTGCGCGCCT ACGTGACGCG GCATTGTCAT GCACTGGCTG ACCTATCATG AGACCCTGCT GCTGCTCACA CTGTATGGAA CCCACATCTG CCTACACTGC CACCTGGTAC CAACTGCTCT ACTTCTTCTA TGATGTCATC TGACTGCTGC TACATGCTAG ACTGCGCTAT TCACCGGATC CTTGACAACT TTATCAGCCA GACTGCCGGG GGCGGCTGCG ATGCTGTGGT CCATTACTTG CTAAGGACCA GACCGCGGGG GCACATGCGC CTCCTCTTCC TTCTGTGACA CCCAGCGTTA CATAATCATT ACCACGGGTG ATAGCCAGAC TGCTGCGAGC AACCCGCCAC CCTGCAGCCA AGCCTGAGCT TTCAGGCACA CCATTCGCTC GCAAAGACTT GCGCCATGTG TCCCACTCAG TGTCTTACAC CCAGCTGAGG T	A	Homo sapiens
479	160202	Adrenomedullin Receptor (ADMR)	NM_007264	cagcctcctc acagctcccc atagcctgga cctgccggcc ctccctccag gaccgagggg ctcccaaggg aaactcaggc gtgtgctggt cccaatgtca gtgaaaccca gctgggggcc tggcccctcg gagggggtca ccgcagtgcc taccagtgac cttggagaga tccacaactg gaccgagctg cttgacctct tcaaccacac tttgtctgag tgccacgtgg agctcagcca gagcaccaag cgcgtggtcc tctttgccct ctacctggcc atgtttgtgg ttgggctggt ggagaacctc ctggtgatat gcgtcaactg gcgcggctca ggccgggcag ggctgatgaa cctctacatc ctcaacatgg ccatcgcgga cctgggcatt gtcctgtctc tgcccgtgtg gatgctggag gtcacgctgg actacacctg gctctggggc agcttctcct gccgcttcac tcactacttc tactttgtca acatgtatag cagcatcttc ttcctggtgt gcctcagtgt cgaccgctat gtcaccctca ccagcgcctc cccctcctgg cagcgttacc agcaccgagt gcggcgggcc atgtgtgcag gcatctgggt cctctcggcc atcatcccgc tgcctgaggt ggtccacatc cagctggtgg agggccctga gcccatgtgc ctcttcatgg caccttttga aacgtacagc acctgggccc tggcggtggc cctgtccacc accatcctgg gcttcctgct gcccttccct ctcatcacag tcttcaatgt gctgacagcc tgccggctgc ggcagccagg acaacccaag agccggcgcc actgcttgct gctgtgcgcc tacgtggccg tctttgtcat ...	A	Homo sapiens

				gtgctggctg ccctatcatg tgaccctgct gctgctcaca ctgcatggga cccacatctc cctccactgc cacctggtcc acctgctcta cttcttctat gatgtcattg actgcttctc catgctgcac tgtgtcatca accccatcct ttacaacttt ctcagcccac acttccgggg ccggctcctg aatgctgtag tccattacct tcctaaggac cagaccaagg cgggcacatg cgcctcctct tcctcctgtt ccacccagca ttccatcatc atcaccaagg gtgatagcca gcctgctgca gcagcccccc accctgagcc aagcctgagc tttcaggcac accatttgct tccaaatact tcccccatct ctcccactca gcctcttaca cccagctgag gta		
480	160202	Adrenomedullin Receptor (ADMR)	NP_009195.1	MSVKPSWGPG PSEGVTAVPT SDLGEIHNWT ELLDLFNHTL SECHVELSQS TKRVVLFALY LAMFVVGLVE NLLVICVNWR GSGRAGLMNL YILNMAIADL GIVLSLPVWM LEVTLDYTWL WGSFSCRFTH YFYFVNMYSS IFFLVCLSVD RYVTLTSASP SWQRYQHRVR RAMCAGIWVL SAIIPLPEVV HIQLVEGPEP MCLFMAPFET YSTWALAVAL STTILGFLLP FPLITVFNVL TACRLRQPGQ PKSRRHCLLL CAYVAVFVMC WLPYHVTLLL LTLHGTHISL HCHLVHLLYF FYDVIDCFSM LHCVINPILY NFLSPHFRGR LLNAVVHYLP KDQTKAGTCA SSSSCSTQHS IIITKGDSQP AAAAPHPEPS LSFQAHHLLP NTSPISPTQP LTPS	P	Homo sapiens
481	160204	G Protein-Coupled Receptor RTA	AX136399	atgcgggttc tgcttccaaa gccatctctt ccagcaggag agggctctac tctgagctcc tattttccaa ggctccgggc cgcgctcggc gctggcctgc tgccccggcg ggtccgccgg ccggaggcgg gagtcacagg aagagccctc cacaaaagga ggcctcggcg gatcaggaca gctgcaggtg ggtgtgcaga ctggtgagct gccagcaggg gcccagacgc gccaggcctg gagatggctg gaaactgctc ctgggaggcc catcccggca acaggaacag gatgtgccct ggcctgagcg aggccccgga actctacagc cggggcttcc tgaccatcga gcagatcgcg atgctgccgc ctccggccgt catgaactac atcttcctgc tcctctgcct gtgtggcctg gtgggcaacg ggctggtcct ctggtttttc ggcttctcca tcaagaggaa cccccttctcc atctacttcc tgcacctggc cagcgccgat gtgggctacc tcttcagcaa ggcggtgttc tccatcctga acacgggggg cttcctgggc acgtttgccg actacatccg cagcgtgtgc cgggtcctgg ggctctgcat gttccttacc ggcgtgagcc tcctgccggc cgtcagcgcc gagcgctgcg cctcggtcat cttccccgcc tggtactggc gccggcggcc caagcgcctg tcggccgtgg tgtgcgccct gctgtgggtc ctgtccctcc tggtcacctg cctgcacaac tacttctgcg tgttcctggg ccgcggggcc cccggcgcgg cctgcaggca catggacatc ttcctgggca tcctcctgtt cctgctctgc tgcccgctca tggtgctgcc ctgcctggcc ctcatcctgc acgtggagtg ccgggcccga cggcgccagc gctctgccaa gctcaaccac gtcatcctgg ccatggtctc cgtcttcctg gtgtcctcca tctacttagg gatcgactgg ttcctcttct gggtcttcca gatcccggcc cccttccccg agtacgtcac tgacctgtgc atctgcatca acagcagcgc caagcccatc gtctacttcc tggccgggag ggacaagtcg cagcggctgt gggagccgct cagggtggtc ttccagcggg ccctgcggga cggcgctgag ctgggggagg ccgggggcag cacgcccaac acagtcacca tggagatgca gtgtccccccg gggaacgcct cctgagactc cagcgcctgg aggaggcagg ggcaggaagc ggcctccaag acccttcgcc ttgggacagg aatgggcacc tgcttctgag tccatacagg agaagaaaga tctgtttcct ctcctcgggc ctccttctcc ctgggctggg gactccaggg gtggctggga gactgggcag ccaccagcaa acagacctgt ggcccctgcc cggctccccc acccattctg ctcccctaga gacctcttgt acagaagttg cccccaggtg gtggggcccc tccttgccct aggctggttg gtaaaagaga ggaggtcaac acccagccta gccacctctg cctcttgggt	A	Homo sapiens

				cagccctcct tgactgtgtc ccagccagca ccaggccagc agcctcatcc ctgccattca gggctgttcc agagattcga tcctcttaag gcattatcag tgagcaaatg tgaaggaaat ggtgtctgga agaaagttct ggttcacatg ccttgtagct aagtctttct gcaaacaacc tcccttcccc ccgtcgagtc atttggtgac tttgatgggg ggatttctgg ttatgtcaag gctctggaga caggaagggc ctttggccgc cttgggtagt tgacctgcct tttctgactc cgggacgagc cagtcctagg ctgcctccgg gagcacttga ggtatcccgc aggccatgag gacccactgg gcagctcctg gacagcctct tggctccagc ccccacccga aagtggacac tggctccgcc ctggccacct ggggactggc actgtggtgc acagtggccc aatgtggcca acggaagttt tataaaagac aaaatgtata tcaataaaca ttttataact tgc		
482	160204	G Protein-Coupled Receptor RTA	CAC39840.1	MAGNCSWEAH PGNRNRMCPG LSEAPELYSR GFLTIEQIAM LPPPAVMNYI FLLLCLCGLV GNGLVLWFFG FSIKRNPFSI YFLHLASADV GYLFSKAVFS ILNTGGFLGT FADYIRSVCR VLGLCMFLTG VSLLPAVSAE RCASVIFPAW YWRRRPKRLS AVVCALLWVL SLLVTCLHNY FCVFLGRGAP GAACRHMDIF LGILLFLLCC PLMVLPCLAL ILHVECRARR RQRSAKLNHV ILAMVSVFLV SSIYLGIDWF LFWVFQIPAP FPEYVTDLCI CINSSAKPIV YFLAGRDKSQ RLWEPLRVVF QRALRDGAEL GEAGGSTPNT VTMEMQCPPG NAS	P	Homo sapiens
483	160206	G Protein-Coupled Receptor GPR32	NM_001506	atgaatgggg tctcggaggg gaccagaggc tgcagtgaca ggcaacctgg ggtcctgaca cgtgatcgct cttgttccag gaagatgaac tcttccggat gcctgtctga ggaggtgggg tccctccgcc cactgactgt ggttatcctg tctgcgtcca ttgtcgtcgg agtgctgggc aatgggctgg tgctgtggat gactgtcttc cgtatggcac gcacggtctc caccgtctgc ttcttccacc tggcccttgc cgatttcatg ctctcactgt ctctgcccat tgccatgtac tatattgtct ccaggcagtg gctcctcgga gagtgggcct gcaaactcta catcaccttt gtgttcctca gctactttgc cagtaactgc ctccttgtct tcatctctgt ggaccgttgc atctctgtcc tctaccccgt ctgggccctg aaccaccgca ctgtgcagcg ggcgagctgg ctggcctttg ggtgtggct cctggccgcc gccttgtgct ctgcgcacct gaaattccgg acaaccagaa aatggaatgg ctgtacgcac tgctacttgg cgttcaactc tgacaatgag actgcccaga tttggattga aggggtcgtg gagggacaca ttatagggac cattggccac ttcctgctgg gcttcctggg gcccttagca atcataggca cctgcgccca cctcatccgg gccaagctct tgcgggaggg ctgggtccat gccaaccggc ccaagaggct gctgctggtg ctggtgagcg ctttctttat cttctggtcc ccgtttaacg tggtgctgtt ggtccatctg tggcgacggg tgatgctcaa ggaaatctac cacccccgga tgctgctcat cctccaggct agctttgcct tgggctgtgt caacagcagc ctcaacccct tcctctacgt cttcgttggc agagatttcc aagaaaagtt tttccagtct ttgacttctg ccctggcgag ggcgtttgga gaggaggagt ttctgtcatc ctgtccccgt ggcaacgccc cccgggaatg a	A	Homo sapiens
484	160206	G Protein-Coupled Receptor GPR32	NP_001497.1	MNGVSEGTRG CSDRQPGVLT RDRSCSRKMN SSGCLSEEVG SLRPLTVVIL SASIVVGVLG NGLVLWMTVF RMARTVSTVC FFHLALADFM LSLSLPIAMY YIVSRQWLLG EWACKLYITF VFLSYFASNC LLVFISVDRC ISVLYPVWAL NHRTVQRASW LAFGVWLLAA ALCSAHLKFR TTRKWNGCTH CYLAFNSDNE TAQIWIEGVV EGHIIGTIGH FLLGFLGPLA IIGTCAHLIR AKLLREGWVH ANRPKRLLLV LVSAFFIFWS PFNVVLLVHL WRRVMLKEIY HPRMLLILQA SFALGCVNSS LNPFLYVFVG RDFQEKFFQS LTSALARAFG EEEFLSSCPR GNAPRE	P	Homo sapiens
485	160210	G Protein-Coupled	NM_004778	cagcctccct ctcccacctc tgtctgcccg ctgcctcttg tctagctgct gtcaggagct gactgcctcc agggctggaa tcctgtgctc cctctgtgcc cagagcccca cgatgtcggc	A	Homo sapiens

Receptor GPR44 (CRTH2)	caacgccaca ctgaagccac tctgccccat cctggagcag atgagccgtc tccagagcca
	cagcaacacc agcatccgct acatcgacca cgcggccgtg ctgctgcacg ggctggcctc
	gctgctgggc ctggtggaga atggagtcat cctcttcgtg gtgggctgcc gcatgcgcca
	gaccgtggtc accacctggg tgctgcacct ggcgctgtcc gacctgttgg cctctgcttc
	cctgcccttc ttcacctact tcttggccgt gggccactcg tgggagctgg gcaccacctt
	ctgcaaactg cactcctcca tcttctttct caacatgttc gccagcggct tcctgctcag
	cgccatcagc ctggaccgct gcctgcaggt ggtgcggccg gtgtgggcgc agaaccaccg
	caccgtggcc gcggcgcaca aagtctgcct ggtgctttgg gcactagcgg tgctcaacac
	ggtgccctat ttcgtgttcc gggacaccat ctcgcggctg gacgggcgca ttatgtgcta
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	ggcggccctg gccgtcagca agttcctgct ggccttcctg gtgccgctgg cgatcatcgc
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	cttcgtgcgc ctggtggcag ccgtcgtggc cgccttcgcg ctctgctggg ggccctacca
	cgtgttcagc ctgctggagg cgcgggcgca cgcaaacccg ggctgcggc cgctcgtgtg
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	cacctcctcc accgcccgct cggcctcccc tttagctctc tgcagccgcc cggaggaacc
	gcggggcccc gcgcgtctcc tcggctggct gctgggcagc tgcgcagcgt ccccgcagac
	gggcccccctg aaccgggcgc tgagcagcac ctcgagttag aacccggccc acgtagggcg
	gcactcacac gcgaaagtat caccagggtg ccgcggttca attcgatatc cggactcctg
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	agactctgaa tctttttcag aaacagtgag ttaaagcagt gcttctcaaa ccttgatgtg
	cctgtgaatc acctaggggt cttgttaagt gcagtctgat ccaggaggcc ggggccgggt
	actgagagtc tgcacttaac aagctcccag gccgagaagc cagtgcggca ggttcacagg
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	gtcggaaggg cacacggggt gcgtctcccc ggagttcagt tttaccagat gatgggggag
	gggggaagga gttttatgtt aaaccatcca tgtatttttg gagaagagag aggaaaggtt
	tgagaagcac tgttccagcc tgccctcttc atttagccaa tgcttactgc gctagacgct
	tcatcccaca atcttaaggg gcagcttcta ttagccagtc tttacagctg agcacattct
	ggctcaggga ggttaagtga cttgcccagt ttcagggcta acgaccacag ggtctgcact
	ctaaccctag gcatcacatg ctcaatgact ctctggtgag cgaggacatt ctctgaccta
	ctcgagggac ttaagatgct accttgtgac ccagcactgc ccaaagtgct tccaaggcag
	aagcagcagg ggatggcgtg gtcaagcact cgggaaacct ggggctaatc aaatccaatg
	ggggaaatga ctaaaagtct tcggtcgtta gaagttgaat gggcacagca actctaagac
	tacagcacac gtcatttctt agctaagcgg accagcctcc ctgtcggcct ggtgttctgt
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	gggctgggca gctaccattt ccctttgcg gatgggaggg gtaacttgca cctctgacct
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	gctgtgtttg agctctgcag cccagggacc gaaaagttgg tgtcaatgaa ttttgcttgg
	tggatgaaat gtcagtggaa gaagcagatg agaaactctt gagatcttgg tcctgtgttt

				tttctgccac caaaggccag ggtcactgaa ggcctggccc acagcaggtg ctgagcaaag ggaacagtga ggtgcccagc tagctgcaga gccaccctgt gttgacacct cgcccctgct ccctcccatc ccttccccct ttactcatag cacttccccc attggacacg tggtgcattt tgcttgttta ttatgttttc tctccatcag aatgaaagct cctcgagggc agggactttg gtctattgtc tgtatttgcc ggtgcctagg attgtgcctg tatgcaacag gcactcaata aatattttg ctgtagactg g		
486	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	MSANATLKPL CPILEQMSRL QSHSNTSIRY IDHAAVLLHG LASLLGLVEN GVILFVVGCR MRQTVVTTWV LHLALSDLLA SASLPFFTYF LAVGHSWELG TTFCKLHSSI FFLNMFASGF LLSAISLDRC LQVVRPVWAQ NHRTVAAAHK VCLVLWALAV LNTVPYFVFR DTISRLDGRI MCYYNVLLLN PGPDRDATCN SRQAALAVSK FLLAFLVPLA IIASSHAAVS LRLQHRGRRR PGRFVRLVAA VVAAFALCWG PYHVFSLLEA RAHANPGLRP LVWRGLPFVT SLAFFNSVAN PVLYVLTCPD MLRKLRRSLR TVLESVLVDD SELGGAGSSR RRRTSSTARS ASPLALCSRP EEPRGPARLL GWLLGSCAAS PQTGPLNRAL SSTSS	P	Homo sapiens
487	160212	G Protein-Coupled Receptor GPR52	NM_005684	atgaatgaat ccaggtggac tgaatggagg atcctgaaca tgagcagtgg cattgtgaat gcgtccgagc gtcactcctg cccacttgga tttggccact acagtgtggt ggatgtctgc atcttcgaga cagtggttat tgtgttgctg acatttctga ttattgctgg gaatctaaca gttatctttg cctttcattg tgctccactg ttacatcatt atactaccag ctatttcatt cagacgatgg catatgctga tcttttcgtt ggagttagct gcttggttcc tactctgtca cttctccact actccacagg tgtccacgag tcattaactt gccgggtttt tggatatatc atctcagttc taaaaagtgt ttctatggca tgtcttgctt gcatcagtgt ggatcgttat cttgcaataa ccaagcctct ttcctacaat caactggtca ccccttgtcg cttgagaatt tgcattattt tgatctggat ctactcctgc ctaattttct tgccttcctt ttttggctgg gggaaacctg gttaccatgg tgacattttt gaatggtgtg ccacgtcttg gctcaccagt gcctatttta ctggctttat tgtttgctta ctttatgctc ctgctgcctt tgttgtctgc ttcacctact tccacatttt caaaatttgc cgtcagcaca ccaaagagat aaatgaccga agagcccgat tccctagtca tgaggtagat tcttccagag agactggaca cagccctgac cgtcgctacg ccatggtttt gtttaggata accagtgtat tttatatgct gtggctcccc tatataattt actttcttct agaaagctcc cgggtcttgg acaatccaac tctgtccttc ttaacaacct ggcttgcagt aagtaatagt tttgtaact gtgtaatata cagcctctcc aacggcgttt tccggctagg cctccgaaga ctgtttgaga caatgtgcac atcctgtatg tgtgtgaagg atcaggaagc acaagaaccc aaacctagga aacgggctaa ttcttgctcc atttga	A	Homo sapiens
488	160212	G Protein-Coupled Receptor GPR52	NP_005675.1	MNESRWTEWR ILNMSSGIVN ASERHSCPLG FGHYSVVDVC IFETVVIVLL TFLIIAGNLT VIFAFHCAPL LHHYTTSYFI QTMAYADLFV GVSCLVPTLS LLHYSTGVHE SLTCRVFGYI ISVLKSVSMA CLACISVDRY LAITKPLSYN QLVTPCRLRI CIILIWIYSC LIFLPSFFGW GKPGYHGDIF EWCATSWLTS AYFTGFIVCL LYAPAAFVVC FTYFHIFKIC RQHTKEINDR RARFPSHEVD SSRETGHSPD RRYAMVLFRI TSVFYMLWLP YIIYFLLESS RVLDNPTLSF LTTWLAVSNS FCNCVIYSLS NGVFRLGLRR LFETMCTSCM CVKDQEAQEP KPRKRANSCS I	P	Homo sapiens
489	160217	G Protein-Coupled	NM_005683	atgagtcagc aaaacaccag tggggactgc ctgtttgacg gtgtcaacga gctgatgaaa accctacagt ttgcagtcca catccccacc ttcgtcctgg gcctgctcct caacctgctg	A	Homo sapiens

		Receptor GPR55		gccatccatg gcttcagcac cttccttaag aacaggtggc ccgattatgc tgccacctcc atctacatga tcaacctggc agtctttgac ctgctgctgg tgctctccct cccattcaag atggtcctgt cccaggtaca gtccccttc ccgtccctgt gcaccctggt ggagtgcctt tacttcgtca gcatgtacgg aagcgtcttc accatctgct tcatcagcat ggaccggttc ttggccatcc gttacccgct actggtgagc cactccggtc cccaggaag atctttggga tctgcatgca caatctgggt cctggtgtgg accggaagca tccctatcta cagtttccat gggaaagtgg aaaaatacat gtgcttccac aacatgtctg atgatacctg gagcgccaag gtcttcttcc cgctggaggt gtttggcttc ctccttccca tgggcatcat gggcttctgc tgctccagga gcatccacat cctgctgggc cgccgagacc acacccagga ctgggtgcag cagaaagcct gcatctacag catcgcagcc agcctggctg tattcgtggt ctccttcctc ccagtccacc tggggttctt cctgcagttc ctggtgagaa acagctttat cgtagagtgc agagccaagc agagcatcag cttcttcttg caattgtcca tgtgtttctc caatgtcaac tgctgcctgg atgttttctg ctactacttt gtcatcaaag aattccgcat gaacatcagg gcccaccggc cttccagggt ccagctggtc ctgcaggaca ccacgatctc ccggggctaa		
490	160217	G Protein-Coupled Receptor GPR55	NP_005674.1	MSQQNTSGDC LFDGVNELMK TLQFAVHIPT FVLGLLLNLL AIHGFSTFLK NRWPDYAATS IYMINLAVFD LLLVLSLPFK MVLSQVQSPF PSLCTLVECL YFVSMYGSVF TICFISMDRF LAIRYPLLVS HSGPPGRSLG SACTIWVLVW TGSIPIYSFH GKVEKYMCFH NMSDDTWSAK VFFPLEVFGF LLPMGIMGFC CSRSIHILLG RRDHTQDWVQ QKACIYSIAA SLAVFVVSFL PVHLGFFLQF LVRNSFIVEC RAKQSISFFL QLSMCFSNVN CCLDVFCYYF VIKEFRMNIR AHRPSRVQLV LQDTTISRG	P	Homo sapiens
491	160219	G Protein-Coupled Receptor GPR35	NM_005301	atgaatggca cctacaacac ctgtggctcc agcgacctca cctggccccc agcgatcaag ctgggcttct acgcctactt gggcgtcctg ctggtgctag gcctgctgct caacagcctg gcgctctggg tgttctgctg ccgcatgcag cagtggacgg agacccgcat ctacatgacc aacctggcgg tggccgacct ctgcctgctg tgcaccttgc ccttcgtgct gcactccctg cgagacacct cagacacgcc gctgtgccag ctctcccagg gcatctacct gaccaacagg tacatgagca tcagcctggt cacggccatc gccgtggacc gctatgtggc cgtgcggcac ccgctgcgtg cccgcgggct gcggtccccc aggcaggctg cggccgtgtg cgcggtcctc tgggtgctgg tcatcggctc cctggtggct cgctggctcc tggggattca ggagggcggc ttctgcttca ggagcacccg gcacaatttc aactccatgc ggttcccgct gctgggattc tacctgcccc tggccgtggt ggtcttctgc tccctgaagg tggtgactgc cctggcccag aggccaccca ccgacgtggg gcaggcagag gccacccgca aggctgcccg catggtctgg gccaacctcc tggtgttcgt ggtctgcttc ctgcccctgc acgtggggct gacagtgcgc ctcgcagtgg gctggaacgc ctgtgccctc ctggagacga tccgtcgcgc cctgtacata accagcaagc tctcagatgc caactgctgc ctggacgcca tctgctacta ctacatggcc aaggagttcc aggaggcgtc tgcactggcc gtggctcccc gtgctaaggc ccacaaaagc caggactctc tgtgcgtgac cctcgcctaa	A	Homo sapiens
492	160219	G Protein-Coupled Receptor GPR35	NP_005292.1	MNGTYNTCGS SDLTWPPAIK LGFYAYLGVL LVLGLLLNSL ALWVFCCRMQ QWTETRIYMT NLAVADLCLL CTLPFVLHSL RDTSDTPLCQ LSQGIYLTNR YMSISLVTAI AVDRYVAVRH PLRARGLRSP RQAAAVCAVL WVLVIGSLVA RWLLGIQEGG FCFRSTRHNF NSMRFPLLGF YLPLAVVVFC SLKVVTALAQ RPPTDVGQAE ATRKAARMVW ANLLVFVVCF LPLHVGLTVR LAVGWNACAL LETIRRALYI TSKLSDANCC LDAICYYYMA KEFQEASALA VAPRAKAHKS	P	Homo sapiens

				QDSLCVTLA		
493	160221	G Protein-Coupled Receptor GPR27	NM_018971	atggcgaacg cgagcgagcc gggtggcagc ggcggcggcg aggcggccgc cctgggcctc aagctggcca cgctcagcct gctgctgtgc gtgagcctag cgggcaacgt gctgttcgcg ctgctgatcg tgcgggagcg cagcctgcac cgcgccccgt actacctgct gctcgacctg tgcctggccg acgggctgcg cgcgctcgcc tgcctcccgg ccgtcatgct ggcggcgcgg cgtgcggcgg ccgcggcggg ggcgccgccg ggcgcgctgg gctgcaagct gctcgccttc ctggccgcgc tcttctgctt ccacgccgcc ttcctgctgc tgggcgtggg cgtcacccgc tacctggcca tcgcgcacca ccgcttctat gcagagcgcc tggccggctg gccgtgcgcc gccatgctgg tgtgcgccgc ctgggcgctg gcgctggccg cggccttccc gccagtgctg gacggcggtg gcgacgacga ggacgcgccg tgcgccctgg agcagcggcc cgacggcgcc cccggcgcgc tgggcttcct gctgctgctg gccgtggtgg tgggcgccac gcacctcgtc tacctccgcc tgctcttctt catccacgac cgccgcaaga tgcggcccgc gcgcctggtg cccgccgtca gccacgactg gaccttccac ggcccgggcg ccaccggcca ggcggccgcc aactggacgg cgggcttcgg ccgcgggccc acgccgcccg cgcttgtggg catccggccc gcagggccgg gccgcggcgc gcgccgcctc ctcgtgctgg aagaattcaa gacggagaag aggctgtgca agatgttcta cgccgtcacg ctgctcttcc tgctcctctg gggcccctac gtcgtggcca gctacctgcg ggtcctggtg cggcccggcg ccgtccccca ggcctacctg acggcctccg tgtggctgac cttcgcgcag gccggcatca accccgtcgt gtgcttcctc ttcaacaggg agctgaggga ctgcttcagg gcccagttcc cctgctgcca gagcccccgg accacccagg cgacccatcc ctgcgacctg aaaggcattg gtttatga	A	Homo sapiens
494	160221	G Protein-Coupled Receptor GPR27	NP_061844.1	MANASEPGGS GGGEAAALGL KLATLSLLLC VSLAGNVLFA LLIVRERSLH RAPYYLLLDL CLADGLRALA CLPAVMLAAR RAAAAAGAPP GALGCKLLAF LAALFCFHAA FLLLGVGVTR YLAIAHHRFY AERLAGWPCA AMLVCAAWAL ALAAAFPPVL DGGGDDEDAP CALEQRPDGA PGALGFLLLL AVVVGATHLV YLRLLFFIHD RRKMRPARLV PAVSHDWTFH GPGATGQAAA NWTAGFGRGP TPPALVGIRP AGPGRGARRL LVLEEFKTEK RLCKMFYAVT LLFLLLWGPY VVASYLRVLV RPGAVPQAYL TASVWLTFAQ AGINPVVCFL FNRELRDCFR AQFPCCQSPR TTQATHPCDL KGIGL	P	Homo sapiens
495	160222	G Protein-Coupled Receptor GPR72	NM_016540	atggtccctc acctcttgct gctctgtctc ctccccttgg tgcgagccac cgagccccac gagggccggg ccgacgagca gagcgcggag gcggccctgg ccgtgcccaa tgcctcgcac ttcttctctt ggaacaacta caccttctcc gactggcaga actttgtggg caggaggcgc tacggcgctg agtcccagaa ccccacggtg aaagccctgc tcattgtggc ttactccttc atcattgtct tctcactctt tggcaacgtc ctggtctgtc atgtcatctt caagaaccag cgaatgcact cggccaccag cctcttcatc gtcaacctgg cagttgccga cataatgatc acgctgctca acacccccct cactttggtt cgctttgtga acagcacatg gatatttggg aagggcatgt gccatgtcag ccgctttgcc cagtactgct cactgcacgt ctcagcactg acactgacag ccattgcggt ggatcgccac caggtcatca tgcacccctt gaaaccccgg atctcaatca caaagggtgt catctacatc gctgtcatct ggaccatggc tacgttcttt tcactcccac atgctatctg ccagaaatta tttaccttca aatacagtga ggacattgtg cgctccctct gcctgccaga cttccctgag ccagctgacc tcttctggaa gtacctggac ttggccacct tcatcctgct ctacatcctg cccctcctca tcatctctgt ggcctacgct	A	Homo sapiens

				cgtgtggcca agaaactgtg gctgtgtaat atgattggcg atgtgaccac agagcagtac tttgccctgc ggcgcaaaaa gaagaagacc atcaagatgt tgatgctggt ggtagtcctc tttgccctct gctggttccc cctcaactgc tacgtcctcc tcctgtccag caaggtcatc cgcaccaaca atgccctcta ctttgccttc cactggtttg ccatgagcag cacctgctat aacccctca tatactgctg gctgaacgag aacttcagga ttgagctaaa ggcattactg agcatgtgtc aaagacctcc caagcctcag gaggacgggc aaccctcccc agttccttcc ttcagggtgg cctggacaga gaagaatgat ggccagaggg ctccccttgc caataacctc ctgcccacct cccaactcca gtctgggaag acagacctgt catctgtgga acccattgtg acgatgagtt agaagaggtt gggaagaggg agtgggaggg gtctgtctcc acctgaggca gggaaagaga gcctattctc acacatgatc ttcagagtgc tggaaacaca ctcctgcaga aggctgtagg actcttgaat tcctaggaaa ctgtccagcc tcctagcccc atgtgatgtg aaaactaaaa ggcaccacca actagacatg tgttcataaa ttcccatcta agaaacactg ggaggcacag cagcctgtat ctctgaggaa gaggagcgag gacaacgttg gcccagatgg gggctgaatc attcaactgc ctccatctgt ggggcagctg ctgccttaca gcccttccta ctagactgag catcccgaag gagacctaaa tcatactttg ggtgtggtga cccagatgca cagagctctg cttgaaacag gtacacgggc cagggaaatg ccagcaa		
496	160222	G Protein-Coupled Receptor GPR72	NP_057624.1	MVPHLLLLCL LPLVRATEPH EGRADEQSAE AALAVPNASH FFSWNNYTFS DWQNFVGRRR YGAESQNPTV KALLIVAYSF IIVFSLFGNV LVCHVIFKNQ RMHSATSLFI VNLAVADIMI TLLNTPFTLV RFVNSTWIFG KGMCHVSRFA QYCSLHVSAL TLTAIAVDRH QVIMHPLKPR ISITKGVIYI AVIWTMATFF SLPHAICQKL FTFKYSEDIV RSLCLPDFPE PADLFWKYLD LATFILLYIL PLLIISVAYA RVAKKLWLCN MIGDVTTEQY FALRRKKKKT IKMLMLVVVL FALCWFPLNC YVLLLSSKVI RTNNALYFAF HWFAMSSTCY NPFIYCWLNE NFRIELKALL SMCQRPPKPQ EDGQPSPVPS FRVAWTEKND GQRAPLANNL LPTSQLQSGK TDLSSVEPIV TMS	P	Homo sapiens
497	160223	G Protein-Coupled Receptor G2A	NM_013345	gggaggggtg cgaggctagc cacgcaggcg gggccctggg tcattttaaa ctctcagagt gaacgtcttg ataggaccga caagacgcat gacatgtact tagatagctt atcttagagc cacactgaga ttggaacccg caaaatatgc cagggaggaa ggtgagcaag ggacacgaca ctcacccgga taaacccaac aagcgcagcg aggctgtggg gaaaccggan ccctgcacac cgccggggga aggtgggccn ccgccaccac cgtggaagaa cagcgcggan gcaccccacg agatgagacg gaactgccgt gagatccagc aatnccnact gtgggtctga cccaggatan cggaaagcag ggacgtgaac agccctcctc atgttcttga caccgtcatt ctcagcagct cagctaaggc acagaggcag ccgagcgtct gtcagcagag tcgtggctga gcagaacacg ccacacgcca cacgccacac gccacacgtg caggattgct caagatggaa gggcacagtg gaatatatat atatatttat atttttggcg agaccctgga ggacacactg aatacaatgg aataccatcc cgcctttgaa aggaagggaa atcctggcac acgctgcaac aggagggagc ttgaggacac tgtggtgagt ggagcacgtg agacacggaa ggacacacgc tgaagacacg cagagatgcc cacccacgtg gggaggtgac aggggagccc agcgcacaga gacaaagtgg aatggaggcc tgggggctgg gagcaaatgc ggagcgagtg cttcctgggg cagagtctcc gtttgggaag atgagaaggt tctgccgacg gatgctggcg atggttgcag aagaatgtga atgtgcccaa tgctactgaa aaacggttac aatggaaacg ccaccccagt gaccaccact gccccgtggg cctccctggg cctctccgcc aagacctgca acaacgtgtc cttcgaagag	A	Homo sapiens

				agcaggatag tcctggtcgt ggtgtacagc gcggtgtgca cgctgggggt gccggccaac tgcctgactg cgtggctggc gctgctgcag gtactgcagg gcaacgtgct ggccgtctac ctgctctgcc tggcactctg cgagctgctg tacacaggca cgctgccact ctgggtcatc tatatccgca accagcaccg ctggacccta ggcctgctgg cctgcaaggt gaccgcctac atcttcttct gcaacatcta cgtcagcatc ctcttcctgt gctgcatctc ctgcgaccgc ttcgtggccg tggtgtacgc gctggagagt cggggccgcc gccgccggag gaccgccatc ctcatctccg cctgcatctt catcctcgtc gggatcgttc actacccggt gttccagacg gaagacaagg agacctgctt tgacatgctg cagatggaca gcaggattgc cgggtactac tacgccaggt tcaccgttgg ctttgccatc cctctctcca tcatcgcctt caccaaccac cggattttca ggagcatcaa gcagagcatg ggcttaagcg ctgcccagaa ggccaaggtg aagcactcgg ccatcgcggt ggttgtcatc ttcctagtct gcttcgcccc gtaccacctg gttctcctcg tcaaagccgc tgccttttcc tactacagag gagacaggaa cgccatgtgc ggcttggagg aaaggctgta cacagcctct gtggtgtttc tgtgcctgtc cacggtgaac ggcgtggctg accccattat ctacgtgctg gccacggacc attcccgcca agaagtgtcc agaatccata aggggtggaa agagtggtcc atgaagacag acgtcaccag gctcacccac agcagggaca ccgaggagct gcagtcgccc gtggcccttg cagaccacta caccttctcc aggcccgtgc acccaccagg gtcaccatgc cctgcaaaga ggctgattga ggagtcctgc tgagcccact gtgtggcagg gggatggcag gttgggggtc ctggggccag caatgtggtt cctgtgcact gagcccacca gccacagtgc ccatgtcccc tctggaagac aaactaccaa tttctcgttc ctgaagccac tccctccgtg accactggcc ccangctttc ccacatggaa ggtggctgca tgccaagggg aagagcgaca cctccaggct tccgggagcc canagagcat gtggcangca gtggggcctc ttcatcatca ncctgcctgg ctggctccct tggctgtggg cangtacacc cctgctggca gaagtacctg gtggctgccc tgttcgcatc agtggcgatg actttatttg cggagcattt ctgcaagcgt tgcctggatg cggtggtgca ttgtgggccc tctgggctcc tgcctcaaaa tgtcagtgag caccatgctg gaagtcacca tcactgtggc agcgcccagg aaggcatagg gcancctacc acctccaang gggcangcgc cctcatctgg ggttgggt		
498	160223	G Protein-Coupled Receptor G2A	NP_037477.1	MCPMLLKNGY NGNATPVTTT APWASLGLSA KTCNNVSFEE SRIVLVVVYS AVCTLGVPAN CLTAWLALLQ VLQGNVLAVY LLCLALCELL YTGTLPLWVI YIRNQHRWTL GLLACKVTAY IFFCNIYVSI LFLCCISCDR FVAVVYALES RGRRRRRTAI LISACIFILV GIVHYPVFQT EDKETCFDML QMDSRIAGYY YARFTVGFAI PLSIIAFTNH RIFRSIKQSM GLSAAQKAKV KHSAIAVVVI FLVCFAPYHL VLLVKAAAFS YYRGDRNAMC GLEERLYTAS VVFLCLSTVN GVADPIIYVL ATDHSRQEVS RIHKGWKEWS MKTDVTRLTH SRDTEELQSP VALADHYTFS RPVHPPGSPC PAKRLIEESC	P	Homo sapiens
499	160224	Endothelin Type B Receptor-Like Protein 2 (ETBR-LP-2)	NM_004767	cgggtacagg gggcccaaga gctgggctgg ctgtctcctg ctcatccagc catgcggtgg ctgtggcccc tggctgtctc tcttgctgtg attttggctg tggggctaag cagggtctct gggggtgccc ccctgcacct gggcaggcac agagccgaga cccaggagca gcagagccga tccaagaggg gcaccgagga tgaggaggcc aagggcgtgc agcagtatgt gcctgaggag tgggcggagt acccccggcc cattcaccct gctggcctgc agccaaccaa gcccttggtg gccaccagcc ctaaccccga caaggatggg ggcaccccag acagtgggca ggaactgagg ggcaatctga caggggcacc agggcagagg ctacagatcc agaacccccct gtatccggtg	A	Homo sapiens

				accgagagct cctacagtgc ctatgccatc atgcttctgg cgctggtggt gtttgcggtg ggcattgtgg gcaacctgtc ggtcatgtgc atcgtgtggc acagctacta cctgaagagc gcctggaact ccatccttgc cagcctggcc ctctgggatt ttctggtcct ctttttctgc ctccctattg tcatcttcaa cgagatcacc aagcagaggc tactgggtga cgtttcttgt cgtgccgtgc ccttcatgga ggtctcctct ctgggagtca cgactttcag cctctgtgcc ctgggcattg accgcttcca cgtggccacc agcaccctgc ccaaggtgag gcccatcgag cggtgccaat ccatcctggc caagttggct gtcatctggg tgggctccat gacgctggct gtgcctgagc tcctgctgtg gcagctggca caggagcctg cccccaccat gggcaccctg gactcatgca tcatgaaacc ctcagccagc ctgcccgagt ccctgtattc actggtgatg acctaccaga acgcccgcat gtggtggtac tttggctgct acttctgcct gcccatcctc ttcacagtca cctgccagct ggtgacatgg cgggtgcgag gccctccagg gaggaagtca gagtgcaggg ccagcaagca cgagcagtgt gagagccagc tcaacagcac cgtggtgggc ctgaccgtgg tctacgcctt ctgcaccctc ccagagaacg tctgcaacat cgtggtggcc tacctctcca ccgagctgac ccgccagacc ctggacctcc tgggcctcat caaccagttc tccaccttct tcaagggcgc catcacccca gtgctgctcc tttgcatctg caggccgctg ggccaggcct tcctggactg ctgctgctgc tgctgctgtg aggagtgcgg cggggcttcg gaggcctctg ctgccaatgg gtcggacaac aagctcaaga ccgaggtgtc ctcttccatc tacttccaca agcccaggga gtcaccccca ctcctgcccc tgggcacacc ttgctgaggc cccagtaggg gtggggaggg agggagaggc cgccaccccc gccggtgtct gctgttcttt ccccataggt cttgctttgt tgcctgtctt gctgtctagg gatggacttg gttcctcttg tcaaggtttg ggaatccg		
500	160224	Endothelin Type B Receptor-Like Protein 2 (ETBR-LP-2)	NP_004758.1	MRWLWPLAVS LAVILAVGLS RVSGGAPLHL GRHRAETQEQ QSRSKRGTED EEAKGVQQYV PEEWAEYPRP IHPAGLQPTK PLVATSPNPD KDGGTPDSGQ ELRGNLTGAP GQRLQIQNPL YPVTESSYSA YAIMLLALVV FAVGIVGNLS VMCIVWHSYY LKSAWNSILA SLALWDFLVL FFCLPIVIFN EITKQRLLGD VSCRAVPFME VSSLGVTTFS LCALGIDRFH VATSTLPKVR PIERCQSILA KLAVIWVGSM TLAVPELLLW QLAQEPAPTM GTLDSCIMKP SASLPESLYS LVMTYQNARM WWYFGCYFCL PILFTVTCQL VTWRVRGPPG RKSECRASKH EQCESQLNST VVGLTVVYAF CTLPENVCNI VVAYLSTELT RQTLDLLGLI NQFSTFFKGA ITPVLLLCIC RPLGQAFLDC CCCCCCEECG GASEASAANG SDNKLKTEVS SSIYFHKPRE SPPLLPLGTP C	P	Homo sapiens
501	160225	Sphingolipid Receptor Edg6	NM_003775	gagtcagccc ccgggggagg ccatgaacgc cacggggacc ccggtggccc ccgagtcctg ccaacagctg gcggccggcg ggcacagccg gctcattgtt ctgcactaca accactcggg ccggctggcc gggcgcgggg ggccggagga tggcggcctg gggcccctgc gggggctgtc ggtggccgcc agctgcctgg tggtgctgga gaacttgctg gtgctggcgg ccatcaccag ccacatgcgg tcgcgacgct gggtctacta ttgcctggtg aacatcacgc tgagtgacct gctcacgggc gcggcctacc tggccaacgt gctgctgtcg ggggcccgca ccttccgtct ggcgcccgcc cagtggttcc tacgggaggg cctgctcttc accgccctgg ccgcctccac cttcagcctg ctcttcactg caggggagcg ctttgccacc atggtgcggc cggtggccga gagcggggcc accaagacca gccgcgtcta cggcttcatc ggcctctgct ggctgctggc cgcgctgctg gggatgctgc ctttgctggg ctggaactgc ctgtgcgcct ttgaccgctg ctccagcctt ctgcccctct actccaagcg ctacatcctc ttctgcctgg tgatcttcgc	A	Homo sapiens

				cggcgtcctg gccaccatca tgggcctcta tggggccatc ttccgcctgg tgcaggccag cgggcagaag gccccacgcc cagcggcccg ccgcaaggcc cgccgcctgc tgaagacggt gctgatgatc ctgctggcct tcctggtgtg ctggggccca ctcttcgggc tgctgctggc cgacgtcttt ggctccaacc tctgggccca ggagtacctg cggggcatgg actggatcct ggccctggcc gtcctcaact cggcggtcaa ccccatcatc tactccttcc gcagcaggga ggtgtgcaga gccgtgctca gcttcctctg ctgcgggtgt ctccggctgg gcatgcgagg gcccggggac tgcctggccc gggccgtcga ggctcactcc ggagcttcca ccaccgacag ctctctgagg ccaagggaca gctttcgcgg ctcccgctcg ctcagctttc ggatgcggga gcccctgtcc agcatctcca gcgtgcggag catctgaagt tgcagtcttg cgtgtggatg gtgcagccac cgggtgcgtg ccaggcaggc cctcctgggg tacaggaagc tgtgtgcacg cagcctcgcc tgtatgggga gcagggaacg ggacaggccc ccatggtctt cccggtggcc tctcggggct tctgacgcca aatgggcttc ccatggtcac cctggacaag gaggtaacca ccccacctcc ccgtaggagc agagagcacc ctggtgtggg ggcgagtggt tccccacaac cccgcttctg tgtgattctg gggaagtccc ggcccctctc tgggcctcag tagggctccc aggctgcaag ggtggactg tgggatgcat gccctggcaa cattgaagtt cgatcatggt aaaaaa		
502	160225	Sphingolipid Receptor Edg6	NP_003766.1	MNATGTPVAP ESCQQLAAGG HSRLIVLHYN HSGRLAGRGG PEDGGLGALR GLSVAASCLV VLENLLVLAA ITSHMRSRRW VYYCLVNITL SDLLTGAAYL ANVLLSGART FRLAPAQWFL REGLLFTALA ASTFSLLFTA GERFATMVRP VAESGATKTS RVYGFIGLCW LLAALLGMLP LLGWNCLCAF DRCSSLLPLY SKRYILFCLV IFAGVLATIM GLYGAIFRLV QASGQKAPRP AARRKARRLL KTVLMILLAF LVCWGPLFGL LLADVFGSNL WAQEYLRGMD WILALAVLNS AVNPIIYSFR SREVCRAVLS FLCCGCLRLG MRGPGDCLAR AVEAHSGAST TDSSLRPRDS FRGSRSLSFR MREPLSSISS VRSI	P	Homo sapiens
503	160228	T-Cell Death-Associated Gene 8 (GPR65)	NM_003608	atgaacagca catgtattga agaacagcat gacctggatc actatttgtt tcccattgtt tacatctttg tgattatagt cagcattcca gccaatattg gatctctgtg tgtgtctttc ctgcaaccca agaaggaaag tgaactagga atttacctct tcagtttgtc actatcagat ttactctatg cattaactct ccctttatgg attgattata cttggaataa agacaactgg actttctctc ctgccttgtg caaagggagt gcttttctca tgtacatgaa gttttacagc agcacagcat tcctcacctg cattgccgtt gatcggtatt tggctgttgt ctaccctttg aagttttttt tcctaaggac aagaagaatt gcactcatgg tcagcctgtc catctggata ttggaaacca tcttcaatgc tgtcatgttg tgggaagatg aaacagttgt tgaatattgc gatgccgaaa agtctaattt tactttatgc tatgacaaat accctttaga gaaatggcaa atcaacctca acttgttcag gacgtgtaca ggctatgcaa tacctttggt caccatcctg atctgtaacc ggaaagtcta ccaagctgtg cggcacaata aagccacgga aaacaaggaa aagaagagaa tcataaaact acttgtcagc atcacagtta cttttgtctt atgctttact ccctttcatg tgatgttgct gattcgctgc attttagagc atgctgtgaa cttcgaagac cacagcaatt ctgggaagcg aacttacaca atgtatagaa tcacggttgc attaacaagt ttaaattgtg ttgctgatcc aattctgtac tgttttgtta ccgaaacagg aagatatgat atgtggaata tattaaaatt ctgcactggg aggtgtaata catcacaaag acaaagaaaa cgcatacttt ctgtgtctac aaaagatact atggaattag aggtccttga gtag	A	Homo sapiens

504	160228	T-Cell Death-Associated Gene 8 (GPR65)	NP_003599.1	MNSTCIEEQH DLDHYLFPIV YIFVIIVSIP ANIGSLCVSF LQPKKESELG IYLFSLSLSD LLYALTLPLW IDYTWNKDNW TFSPALCKGS AFLMYMKFYS STAFLTCIAV DRYLAVVYPL KFFFLRTRRI ALMVSLSIWI LETIFNAVML WEDETVVEYC DAEKSNFTLC YDKYPLEKWQ INLNLFRTCT GYAIPLVTIL ICNRKVYQAV RHNKATENKE KKRIIKLLVS ITVTFVLCFT PFHVMLLIRC ILEHAVNFED HSNSGKRTYT MYRITVALTS LNCVADPILY CFVTETGRYD MWNILKFCTG RCNTSQRQRK RILSVSTKDT MELEVLE	P	Homo sapiens
505	160300	Encephalopsin	NM_014322	cgagccccgc cgcaagctga gcgcctccgc ccgccaggcg cgccggcgcc gggccatgta ctcggggaac cgcagcggcg gccacggcta ctgggacggc ggcggggccg cgggcgctga ggggccggcg ccggcgggga cactgagccc cgcgcccctc ttcagccccg gcacctacga gcgcctggcg ctgctgctgg gctccattgg gctgctgggc gtcggcaaca acctgctggt gctcgtcctc tactacaagt tccagcggct ccgcactccc actcacctcc tcctggtcaa catcagcctc agcgacctgc tggtgtccct cttcggggtc acctttacct tcgtgtcctg cctgaggaac ggctgggtgt gggacaccgt gggctgcgtg tgggacgggt ttagcggcag cctcttcggg attgtttcca ttgccacccct aaccgtgctg gcctatgaac gttacattcg cgtggtccat gccagagtga tcaatttttc ctgggcctgg agggccatta cctacatctg gctctactca ctggcgtggg caggagcacc tctcctggga tggaacaggt acatcctgga cgtacacgga ctaggctgca ctgtggactg gaaatccaag gatgccaacg attcctcctt tgtgcttttc ttatttcttg gctgcctggt ggtgcccctg ggtgtcatag cccattgcta tggccatatt ctatattcca ttcgaatgct tcgttgtgtg gaagatcttc agacaattca agtgatcaag attttaaaat atgaaaagaa actggccaaa atgtgctttt taatgatatt caccttcctg gtctgttgga tgccttatat cgtgatctgc ttcttggtgg ttaatggtca tggtcacctg gtcactccaa caatatctat tgtttcgtac ctctttgcta aatcgaacac tgtatacaat ccagtgattt atgtcttcat gatcagaaag tttcgaagat ccctttttgca gcttctgtgc ctccgactgc tgaggtgcca gaggcctgct aaagacctac cagcagctgg aagtgaaatg cagatcagac ccattgtgat gtcacagaaa gatggggaca ggccaaagaa aaaagtgact ttcaactctt cttccatcat ttttatcatc accagtgatg aatcactgtc agttgacgac agcgacaaaa ccattggggt ccaaagtttg atgttaatcc aagttcgtcc tttgtaggaa tgaaggatgg caacgaaagg tggggcctta aattggatgc cacttttgga ctttcatcat cctcctgaag aagaagtgtc tggaataccc gttctatgta atatcaacag aaccttgtgg tccagcagga aatccgaatt gcccatatgc tcttgggcct caggaagagg ttgaacaaaa acaaattctt ttaattcaac gggtgcttta cataatgaaa aaaccacttg tgcacacgat gggcatctaa catcatcatc ttctaatgtg ttggagattt tcatttcaaa tatatttttt aaattactct attttccaaa acacgtaatg catttttctc gaaaatacct tactgtaaaa ataactgtcg cgtacacatg tgtgaagtag ctagaacata ctgaattttt tttgtactgt tggactctat tcagtgtcat gtcctatatc tgatcaagtt atcaaggaga taattctaga atgaaaaaga aaatcctctt gttggaaaca aaagacgttt tatatgtgca gtatgacaaa gaggagtttc agagacaact ttgaatcctt gtcagcctgg agaccagcac cagaggaatc tacaaggcaa actcccatat atttgcttcc cccaaattgc tgcccctaca gactcaaagc tctttttctt tgttttgttg tttctctaaa aatttactgt tctttgtcga tgctatataa gccagggagt tctaagacgc cagctctttg agatttgctc attcccctgt atttcccaca tatatattac atatacccgc taataaattt atgtttgttt taaaaaaaaa	A	Homo sapiens

				aaaaaaaaaa		
506	160300	Encephalopsin	NP_055137.1	MYSGNRSGGH GYWDGGGAAG AEGPAPAGTL SPAPLFSPGT YERLALLLGS IGLLGVGNNL LVLVLYYKFQ RLRTPTHLLL VNISLSDLLV SLFGVTFTFV SCLRNGWVWD TVGCVWDGFS GSLFGIVSIA TLTVLAYERY IRVVHARVIN FSWAWRAITY IWLYSLAWAG APLLGWNRYI LDVHGLGCTV DWKSKDANDS SFVLFLFLGC LVVPLGVIAH CYGHILYSIR MLRCVEDLQT IQVIKILKYE KKLAKMCFLM IFTFLVCWMP YIVICFLVVN GHGHLVTPTI SIVSYLFAKS NTVYNPVIYV FMIRKFRRSL LQLLCLRLLR CQRPAKDLPA AGSEMQIRPI VMSQKDGDRP KKKVTFNSSS IIFIITSDES LSVDDSDKTI GVQSLMLIQV RPL	P	Homo sapiens
507	160312	Sphingolipid Receptor Edg5	NM_004230	atgggcagct tgtactcgga gtacctgaac cccaacaagg tccaggaaca ctataattat accaaggaga cgctggaaac gcaggagacg acctcccgcc aggtggcctc ggccttcatc gtcatcctct gttgcgccat tgtggtggaa aaccttctgg tgctcattgc ggtggcccga aacagcaagt tccactcggc aatgtacctg tttctgggca acctggccgc ctccgatcta ctggcaggcg tggccttcgt agccaatacc ttgctctctg gctctgtcac gctgaggctg acgcctgtgc agtggtttgc ccgggagggc tctgcctcca tcacgctctc ggcctctgtc ttcagcctcc tggccatcgc cattgagcgc cacgtggcca ttgccaaggt caagctgtat ggcagcgaca agagctgccg catgcttctg ctcatcgggg cctcgtggct catctcgctg gtcctcggtg gcctgcccat ccttggctgg aactgcctgg gccacctcga ggcctgctcc actgtcctgc ctctctacgc caagcattat gtgctgtgcg tggtgaccat cttctccatc atcctgttgg ccatcgtggc cctgtacgtg cgcatctact gcgtggtccg ctcaagccac gctgacatgg ccgccccgca gacgctagcc ctgctcaaga cggtcaccat cgtgctaggc gtctttatcg tctgctggct gcccgccttc agcatcctcc ttctggacta tgcctgtccc gtccactcct gcccgatcct ctacaaagcc cactactttt tcgccgtctc caccctgaat tccctgctca accccgtcat ctacacgtgg cgcagccggg acctgcggcg ggaggtgctt cggccgctgc agtgctggcg gccgggggtg ggggtgcaag gacggaggcg ggtcgggacc ccgggccacc acctcctgcc actccgcagc tccagctccc tggagagggg catgcacatg cccacgtcac ccacgtttct ggagggcaac acggtggtct ga	A	Homo sapiens
508	160312	Sphingolipid Receptor Edg5	NP_004221.1	MGSLYSEYLN PNKVQEHYNY TKETLETQET TSRQVASAFI VILCCAIVVE NLLVLIAVAR NSKFHSAMYL FLGNLAASDL LAGVAFVANT LLSGSVTLRL TPVQWFAREG SASITLSASV FSLLAIAIER HVAIAKVKLY GSDKSCRMLL LIGASWLISL VLGGLPILGW NCLGHLEACS TVLPLYAKHY VLCVVTIFSI ILLAIVALYV RIYCVVRSSH ADMAAPQTLA LLKTVTIVLG VFIVCWLPAF SILLLDYACP VHSCPILYKA HYFFAVSTLN SLLNPVIYTW RSRDLRREVL RPLQCWRPGV GVQGRRRVGT PGHHLLPLRS SSSLERGMHM PTSPTFLEGN TVV	P	Homo sapiens
509	160314	G Protein-Coupled Receptor GPR103	AF411117	atgatctgct gcagtgctct gagccctagg attcatcttt cttttcaccg tagcctgact ggcattgtat tagcaaactc atcactagac atcgtactac acgacacgta ctacgttgta gcccactgcg ggggaaatgt taggcgcctg cattgcggtg gccccgcgtc ccgggagcgc acagcaatgc aggcgcttaa cattaccccg gagcagttct ctcggctgct gcgggaccac aacctgacgc gggagcagtt catcgctctg taccggctgc gaccgctcgt ctacacccca gagctgccgg gacgcgccaa gctggccctc gtgctcaccg gcgtgctcat cttcgccctg gcactctttg gcaatgctct ggtgttctac gtggtgaccc gcagcaaggc catgcgcacc gtcaccaaca tctttatctg ctccttggcg ctcagtgacc tgctcatcac cttcttctgc	A	Homo sapiens

				attcccgtca ccatgctcca gaacatttcc gacaactggc tggggggtgc tttcatttgc aagatggtgc catttgtcca gtctaccgct gttgtgacag aaatcctcac tatgacctgc attgctgtgg aaaggcacca gggacttgtg catcctttta aaatgaagtg gcaatacacc aaccgaaggg ctttcacaat gctaggtgtg gtctggctgg tggcagtcat cgtaggatca cccatgtggc acgtgcaaca acttgagatc aaatatgact tcctatatga aaaggaacac atctgctgct tagaagagtg gaccagccct gtgcaccaga agatctacac caccttcatc ctgtcatcct cttcctcctg cctcttatgg aagaagaaac gagctgtcat tatgatggtg acagtggtgg ctctctttgc tgtgtgctgg gcaccattcc atgttgtcca tatgatgatt gaatacagta attttgaaaa ggaatatgat gatgtcacaa tcaagatgat tttgctatc gtgcaaatta ttggattttc caactccatc tgtaatccca ttgtctatgc atttatgaat gaaaacttca aaaaaaatgt tttgtctgca gtttgttatt gcatagtaaa taaaaccttc tctccagcac aaaggcatgg aaattcagga attacaatga tgcggaagaa agcaaagttt tccctcagag agaatccagt ggaggaaacc aaaggagaag cattcagtga tggcaacatt gaagtcaaat tgtgtgaaca gacagaggag aagaaaaagc tcaaacgaca tcttgctctc tttaggtctg aactggctga gaattctcct ttagacagtg ggcattaa		
510	160314	G Protein-Coupled Receptor GPR103	ENSMPRT221753	MKIKYDFLYE KEHICCLEEW TSPVHQKIYT TFILVILFLL PLMVMLILYS KIGYELWIKK RVGDGSVLRT IHGKEMSKIA RKKKRAVIMM VTVVALFAVC WAPFHVVHMM IEYSNFEKEY DDVTIKMIFA IVQIIGFSNS ICNPIVYAFM NENFKKNVLS AVCYCIVNKT FSPAQRHGNS GITMMRKKAK FSLRENPVEE TKGEAFSDGN IEVKLCEQTE EKKKLKRHLA LFRSELAENS PLDSG	P	Homo sapiens
511	160317	Neuropeptide FF 2 Receptor	NM_004885	tctggagcca agtaatggtg atactgatgc ttccttttct ttgccgcgct cggattctga gtttcacaag aatgtacctg ggtgcccctt agcgggatat gaatagcttc ttcggaaccc cagcggccag ctggtgcctc ctggaaagtg acgtctcatc tgcaccggac aaggaggcgg ggagggagcg cagagcactc agcgtccagc agcgcggcgg gccagcctgg agcggaagcc tggagtggag caggcagtcc gcgggggaca gacgtcggct gggattgagc cggcagactg cgaaaagtag ctggagccgg agcagggaca gaacctgttg ctgcagacgg gcttggtgga ttctggttcc tgccgccgac agggctcgcc gggagaggtt catcatgaat gagaaatggg acacaaactc ttcagaaaac tggcatccca tctggaatgt caatgacaca aagcatcatc tgtactcaga tattaatatt acctatgtga actactatct tcaccagcct caagtggcag caatcttcat tatttcctac tttctgatct tctttttgtg catgatggga aatactgtgg tttgctttat tgtaatgagg aacaaacata tgcacacagt cactaatctc ttcatcttaa acctggccat aagtgattta ctagttggca tattctgcat gcctataaca ctgctggaca atattatagc aggatggcca tttggaaaca cgatgtgcaa gatcagtgga ttggtccagg gaatatctgt cgcagcttca gtctttacgt tagttgcaat tgctgtagat aggttccagt gtgtggtcta ccccttttaaa ccaaagctca ctatcaagac agcgtttgtc attattatga tcatctgggt cctagccatc accattatgt ctccatctgc agtaatgtta catgtgcaag aagaaaaata ttaccgagtg agactcaact cccagaataa aaccagtcca gtctactggt gccgggaaga ctggccaaat caggaaatga ggaagatcta caccactgtg ctgtttgcca acatctacct ggctcccctc tccctcattg tcatcatgta tggaaggatt ggaatttcac tcttcagggc tgcagttcct cacacaggca ggaagaacca ggagcagtgg cacgtggtgt ccaggaaaaa gcagaagatc attaagatgc tcctgattgt ggccctgctt tttattctct	A	Homo sapiens

				catggctgcc cctgtggact ctaatgatgc tctcagacta cgctgacctt tctccaaatg		
				aactgcagat catcaacatc tacatctacc cttttgcaca ctggctggca ttcggcaaca		
				gcagtgtcaa tcccatcatt tatggtttct tcaacgagaa tttccgccgt ggtttccaag		
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				tagtgatgga agaattaaaa gaaactacta acagcagtga gatttaaaaa gagctagtgt		
				gataatccta actctactac gcattatata tttaaatcca ttgctttttg tggctttgca		
				cttcaaattt ttcaaagaat gttctaaata aaacatttac tgaaagccct ctctggcaaa		
				aaaattaaaa ataaacaaaa atggtcataa gatcataaac aatcttatgt tgtataaaaa		
				tacgtagagt gacttagaca tgtttgcatg aataaatata tttctagaga acagttaaaa		
				aaaaaaaaaa aaaaaa		
512	160317	Neuropeptide FF 2 Receptor	NP_004876.1	MNSFFGTPAA SWCLLESDVS SAPDKEAGRE RRALSVQQRG GPAWSGSLEW SRQSAGDRRR	P	Homo sapiens
				LGLSRQTAKS SWSRSRDRTC CCRRAWWILV PAADRARRER FIMNEKWDTN SSENWHPIWN		
				VNDTKHHLYS DINITYVNYY LHQPQVAAIF IISYFLIFFL CMMGNTVVCF IVMRNKHMHT		
				VTNLFILNLA ISDLLVGIFC MPITLLDNII AGWPFGNTMC KISGLVQGIS VAASVFTLVA		
				IAVDRFQCVV YPFKPKLTIK TAFVIIMIIW VLAITIMSPS AVMLHVQEEK YYRVRLNSQN		
				KTSPVYWCRE DWPNQEMRKI YTTVLFANIY LAPLSLIVIM YGRIGISLFR AAVPHTGRKN		
				QEQWHVVSRK KQKIIKMLLI VALLFILSWL PLWTLMMLSD YADLSPNELQ IINIYIYPFA		
				HWLAFGNSSV NPIIYGFFNE NFRRGFQEAF QLQLCQKRAK PMEAYTLKAK SHVLINTSNQ		
				LVQESTFQNP HGETLLYRKS AEKPQQELVM EELKETTNSS EI		
513	160324	G Protein-Coupled Receptor GPR86/GPR94/ P2Y13	NM_023914	aacagtattt tccttttcaa cacatctatt gaaagtgttg gataaatgca ggatgttaat	A	Homo sapiens
				atgctataaa cataaagtct gtttttaaaa aatagcattt gaaaatcatg aagggctttt		
				tgttttcttt tgtttgtata tatgtttatt ggtaacaggt gacactggaa gcaatgaaca		
				ccacagtgat gcaaggcttc aacagatctg agcggtgccc cagagacact cggatagtac		
				agctggtatt cccagccctc tacacagtgg ttttcttgac cggcatcctg ctgaatactt		
				tggctctgtg ggtgtttgtt cacatcccca gctcctccac cttcatcatc tacctcaaaa		
				acactttggt ggccgacttg ataatgacac tcatgcttcc tttcaaaatc ctctctgact		
				cacacctggc accctggcag ctcagagctt ttgtgtgtcg tttttcttcg gtgatatttt		
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				caatcttcat ctggttcttt ttgttcttca tctccctgcc aaatatgatc ttgagcaaca		
				aggaagcaac accatcgtct gtgaaaaagt gtgcttcctt aaaggggcct ctggggctga		
				aatggcatca aatggtaaat aacatatgcc agtttatttt ctggactgtt tttatcctaa		
				tgcttgtgtt ttatgtggtt attgcaaaaa aagtatatga ttcttataga aagtccaaaa		
				gtaaggacag aaaaaacaac aaaaagctgg aaggcaaagt atttgttgtc gtggctgtct		
				tctttgtgtg ttttgctcca tttcattttg ccagagttcc atatactcac agtcaaacca		
				acaataagac tgactgtaga ctgcaaaatc aactgtttat tgctaaagaa acaactctct		
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				tcacagaaaa gctaccatgt atgcaaggga gaaagaccac agcatcaagc caagaaaatc		
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514	160324	G Protein-Coupled Receptor GPR86/GPR94/ P2Y13	NP_076403.1	MNTTVMQGFN RSERCPRDTR IVQLVFPALY TVVFLTGILL NTLALWVFVH IPSSSTFIIY LKNTLVADLI MTLMLPFKIL SDSHLAPWQL RAFVCRFSSV IFYETMYVGI VLLGLIAFDR FLKIIRPLRN IFLKKPVFAK TVSIFIWFFL FFISLPNMIL SNKEATPSSV KKCASLKGPL GLKWHQMVNN ICQFIFWTVF ILMLVFYVVI AKKVYDSYRK SKSKDRKNNK KLEGKVFVVV AVFFVCFAPF HFARVPYTHS QTNNKTDCRL QNQLFIAKET TLFLAATNIC MDPLIYIFLC KKFTEKLPCM QGRKTTASSQ ENHSSQTDNI TLG	P	Homo sapiens
515	160329	Proteinase-Activated Receptor 4	NM_003950	ctcccacggg ctggctggca agcggccctg gtgggtctgc gggggcaggg gcagccttcc tggtttatct ccaccggcgc gatctgctcg tccgcctcgg ctccagaagc tggggctcag ggtccggcga ggcaggaagc ctgaggccac agcccagagc agcctgagtg cagtcatgtg ggggcgactg ctcctgtggc ccctggtgct ggggttcagc ctgtctggcg gcacccagac ccccagcgtc tacgacgaga gcgggagcac cggaggtggt gatgacagca cgccctcaat cctgcctgcc ccccgcggct acccaggcca agtctgtgcc aatgacagtg acaccctgga gctcccggac agctcacggg cactgcttct gggctgggtg cccaccaggc tggtgcccgc	A	Homo sapiens

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cggaggttgc ggtcagctga gatggtgcca ctgcactcca gcctgggcga aagagcgact
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516	160329	Proteinase-Activated Receptor 4	NP_003941.1	MWGRLLLWPL VLGFSLSGGT QTPSVYDESG STGGGDDSTP SILPAPRGYP GQVCANDSDT LELPDSSRAL LLGWVPTRLV PALYGLVLVV GLPANGLALW VLATQAPRLP STMLLMNLAT ADLLLALALP PRIAYHLRGQ RWPFGEAACR LATAALYGHM YGSVLLLAAV SLDRYLALVH PLRARALRGR RLALGLCMAA WLMAAALALP LTLQRQTFRL ARSDRVLCHD ALPLDAQASH WQPAFTCLAL LGCFLPLLAM LLCYGATLHT LAASGRRYGH ALRLTAVVLA SAVAFFVPSN LLLLLHYSDP SPSAWGNLYG AYVPSLALST LNSCVDPFIY YYVSAEFRDK VRAGLFQRSP GDTVASKASA EGGSRGMGTH SSLLQ	P	Homo sapiens

517	160330	G Protein-Coupled-Receptor TM7XN1/GPR56	NM_005682	cggcagcagg gtctcgctct gtcacacagg ctggagtgca gtggtgtgat cttggctcat cgtaacctcc acctcccggg ttcaagtgat tctcatgcct cagcctcccg agtagctggg attacaggtg gtgacttcca agagtgactc cgtcggagga aaatgactcc ccagtcgctg ctgcagacga cactgttcct gctgagtctg ctcttcctgg tccaaggtgc ccacggcagg ggccacaggg aagactttcg cttctgcagc cagcggaacc agacacacag gagcagcctc cactacaaac ccacaccaga cctgcgcatc tccatcgaga actccgaaga ggccctcaca gtccatgccc ctttccctgc agcccaccct gcttcccgat ccttccctga ccccagggc ctctaccact tctgcctcta ctggaaccga catgctggga gattacatct tctctatggc aagcgtgact tcttgctgag tgacaaagcc tctagcctcc tctgcttcca gcaccaggag gagagcctgg ctcagggccc cccgctgtta gccacttctg tcacctcctg gtggagccct cagaacatca gcctgcccag tgccgccagc ttcaccttct ccttccacag tcctccccac acggccgctc acaatgcctc ggtggacatg tgcgagctca aaagggacct ccagctgctc agccagttcc tgaagcatcc ccagaaggcc tcaaggaggc cctcggctgc ccccgccagc cagcagttgc agagcctgga gtcgaaactg acctctgtga gattcatggg ggacatggtg tccttcgagg aggaccggat caacgccacg gtatggaagc tccagcccac agccggcctc caggacctgc acatccactc ccggcaggag gaggagcaga gcgagatcat ggagtactcg gtgctgctgc ctcgaacact cttccagagg acgaaaggcc ggagcgggga ggctgagaag agactcctcc tggtggactt cagcagccaa gccctgttcc aggacaagaa ttccagccaa gtcctgggtg agaaggtctt ggggattgtg gtacagaaca ccaaagtagc caacctcacg gagcccgtgg tgctcacttt ccagcaccag ctacagccga agaatgtgac tctgcaatgt gtgttctggg ttgaagaccc cacattgagc agcccggggc attggagcag tgctgggtgt gagaccgtca ggagagaaac ccaaacatcc tgcttctgca accacttgac ctactttgca gtgctgatgg tctcctcggt ggaggtggac gccgtgcaca agcactacct gagcctcctc tcctacgtgg gctgtgtcgt ctctgccctg gcctgccttg tcaccattgc cgcctacctc tgctccaggg tgcccctgcc gtgcaggagg aaacctcggg actacaccat caaggtgcac atgaacctgc tgctggccgt cttcctgctg gacacgagct tcctgctcag cgagccggtg gccctgacag gctctgaggc tggctgccga gccagtgcca tcttcctgca cttctccctg ctcacctgcc tttcctggat gggcctcgag gggtacaacc tctaccgact cgtggtggag gtctttggca cctatgtccc tggctaccta ctcaagctga gcgccatggg ctggggcttc cccatctttc tggtgacgct ggtggccctg gtggatgtgg acaactatgg ccccatcatc ttggctgtgc ataggactcc agagggcgtc atctaccctt ccatgtgctg gatccgggac tccctggtca gctacatcac caacctgggc ctcttcagcc tggtgtttct gttcaacatg gccatgctag ccaccatggt ggtgcagatc ctgcggctgc gcccccacac ccaaaagtgg tcacatgtgc tgacactgct gggcctcagc ctggtccttg gcctgccctg ggccttgatc ttcttctcct ttgcttctgg caccttccag cttgtcgtcc tctacctttt cagcatcatc acctccttcc aaggcttcct catcttcatc tggtactggt ccatgcggct gcaggcccgg ggtggcccct cccctctgaa gagcaactca gactgcgcca ggctccccat cagctcgggc agcacctcgt ccagccgcat ctaggcctcc agcccacctg cccatgtgat gaagcagaga tgcggcctcg tcgcacactg cctgtggccc ccgagccagg cccagcccca ggccagtcag ccgcagactt tggaaagccc aacgaccatg gagagatggg ccgttgccat ggtggacgga ctcccggggc tggggctttt gaattggcct tggggactac tcggctctca ctcagctccc	A	Homo sapiens

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519	160387	Glucagon-Like Peptide 2 Receptor	NM_004246	atgaagctgg gatcgagcag ggcagggcct gggagaggaa gcgcgggact cctgcctggc gtccacgagc tgcccatggg catccctgcc ccctgggga ccagtcctct ctccttccac aggaagtgct ctctctgggc ccctgggagg cccttcctca ctctggtcct gctggtttcc atcaagcaag ttacaggatc cctccttgag gaaacgactc ggaagtgggc tcagtacaaa caggcatgtc tgagagactt actcaaggaa ccttctggca tattttgtaa cgggacattt gatcagtacg tgtgttggcc tcattcttct cctggaaatg tctctgtacc ctgcccttca tacttacctt ggtggagtga agagagctca ggaagggcct acagacactg cttggctcag gggacttggc agacgataga gaacgccacg gatatttggc aggatgactc cgaatgctcc gagaaccaca gcttcaagca aaacgtggac cgttatgcct tgctgtcaac cttgcagctg atgtacaccg tgggatactc cttctctctt atctccctct tcctggctct caccctcctc ttgtttcttc gaaaactcca ctgcacgcgc aactacatcc acatgaactt gtttgcttct ttcatcctga gaaccctggc tgtactggtg aaggacgtcg tcttctacaa ctcttactcc aagaggcctg acaatgagaa tgggtggatg tcctacctgt cagagatgtc cacctcctgc cgctcagtcc aggttctctt gcattacttt gtgggtgcca attacttatg gctgctggtt gaaggcctct acctccacac gctgctggag cccacagtgc ttcctgagag gcggctgtgg cccagatacc tgctgttggg ttgggccttc cctgtgctat ttgttgtacc ctggggtttc gcccgtgcac acctggagaa cacagggtgc tggacaacaa atgggaataa gaaaatctgg tggatcatcc gaggacccat gatgctctgt gtaacagtca atttcttcat cttcctgaaa attctcaagc ttctcatttc taagctcaaa gctcatcaaa tgtgcttcag agattataaa tacagattgg caaaatcaac actggtcctc attcctttat tgggcgttca tgagatcctc ttctctttca tcactgatga tcaagttgaa ggatttgcaa aacttatacg acttttcatt cagttgacac tgagctcctt tcatgggttc ctggtggcct tgcagtatgg ttttgccaat	A	Homo sapiens

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520	160387	Glucagon-Like Peptide 2 Receptor	NP_004237.1	MKLGSSRAGP GRGSAGLLPG VHELPMGIPA PWGTSPLSFH RKCSLWAPGR PFLTLVLLVS IKQVTGSLLE ETTRKWAQYK QACLRDLLKE PSGIFCNGTF DQYVCWPHSS PGNVSVPCPS YLPWWSEESS GRAYRHCLAQ GTWQTIENAT DIWQDDSECS ENHSFKQNVD RYALLSTLQL MYTVGYSFSL ISLFLALTLL LFLRKLHCTR NYIHMNLFAS FILRTLAVLV KDVVFYNSYS KRPDNENGWM SYLSEMSTSC RSVQVLLHYF VGANYLWLLV EGLYLHTLLE PTVLPERRLW PRYLLLGWAF PVLFVVPWGF ARAHLENTGC WTTNGNKKIW WIIRGPMMLC VTVNFFIFLK ILKLLISKLK AHQMCFRDYK YRLAKSTLVL IPLLGVHEIL FSFITDDQVE GFAKLIRLFI QLTLSSFHGF LVALQYGFAN GEVKAELRKY WVRFLLARHS GCRACVLGKD FRFLGKCPKK LSEGDGAEKL RKLQPSLNSG RLLHLAMRGL GELGAQPQQD HARWPRGSSL SECSEGDVTM ANTMEEILEE SEI	P	Homo sapiens
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             Pass G-Type               GHLSPQGKLT LPEEHPCLKA PRLRCQSCKL AQAPGLRAGE RSPEESLGGR RKRNVNTAPQ
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696	128	5-HT1B Receptor	P28222	585	KQTPNRTGKRLTRAQLITD	Homo sapiens
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704	130	5-HT1E Receptor	P28566	815	RHLSNRSTDSQNSFASC	Homo sapiens
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770	309	Melanocortin 2 Receptor (adrenocorticotropic hormone) (MC2R)	CAA46587.1	4	CPRVVLPEEIFFTIS	Homo sapiens
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774	376	Alpha 1d-adrenoceptor	AAA35496.1	12	RSTTRSLEAGVKRERGKASE	Homo sapiens
775	376	Alpha 1d-adrenoceptor	AAA35496.1	13	KEPVPPDERFCGITEEAG	Homo sapiens
776	376	Alpha 1d-adrenoceptor	AAA35496.1	14	RSTEMVQRLRMEAVQ	Homo sapiens
777	376	Alpha 1d-adrenoceptor	AAA35496.1	15	PRPSCAPKSPACRTRSP	Homo sapiens
778	377	Alpha 1b-adrenoceptor	P35368	696	KEMSNSKELTLRIHSK	Homo sapiens
779	377	Alpha 1b-adrenoceptor	P35368	697	GGSLERSQSRKDSLDDSGSC	Homo sapiens
780	377	Alpha 1b-adrenoceptor	P35368	698	APEPPGRRGRHDSGPL	Homo sapiens
781	377	Alpha 1b-adrenoceptor	P35368	699	KLLTEPESPGTDGGASNGGC	Homo sapiens
782	379	Alpha 1c-adrenoceptor	AAA93114.1	1245	GSGMASAKTKTHFSVR	Homo sapiens
783	379	Alpha 1c-adrenoceptor	AAA93114.1	1246	RIPVGSRETFYRISKTDGVC	Homo sapiens
784	379	Alpha 1c-adrenoceptor	AAA93114.1	1247	SSMPRGSARITVSKDQSSC	Homo sapiens
785	379	Alpha 1c-adrenoceptor	AAA93114.1	1248	ESRGLKSGLKTDKSDS	Homo sapiens
786	387	Alpha 2a-adrenoceptor	P08913	1343	ERRPNGLGPERSAGPG	Homo sapiens
787	387	Alpha 2a-adrenoceptor	P08913	1344	PGEPAPAGPRDTDALD	Homo sapiens
788	387	Alpha 2a-adrenoceptor	P08913	1345	RGPRGKGKARASQVKPGD	Homo sapiens
789	387	Alpha 2a-adrenoceptor	P08913	1346	RGPGATGIGTPAAGPGEE	Homo sapiens
790	387	Alpha 2a-adrenoceptor	P08913	1347	RVGAAKASRWRGRQNRE	Homo sapiens
791	388	Alpha 2b-adrenoceptor	P18089	1348	IYKGDQGPQPRGRPQC	Homo sapiens

792	388	Alpha 2b-adrenoceptor	P18089	1349	RSNRRGPRAKGGPGQGE	Homo sapiens
793	388	Alpha 2b-adrenoceptor	P18089	1350	ASAREVNGHSKSTGEK	Homo sapiens
794	388	Alpha 2b-adrenoceptor	P18089	1351	RGVGAIGGQWWRRRAH	Homo sapiens
795	389	Alpha 2c-adrenoceptor	P18825	1352	RAPVGPDGASPTTENG	Homo sapiens
796	389	Alpha 2c-adrenoceptor	P18825	1353	RTGTARPRPPTWSRTR	Homo sapiens
797	389	Alpha 2c-adrenoceptor	P18825	1354	ASRSPGPGGRLSRASS	Homo sapiens
798	389	Alpha 2c-adrenoceptor	P18825	1355	RSVEFFLSRRRRARSSVC	Homo sapiens
799	599	Bradykinin B1 Receptor	P46663	798	PMASGRQQRRRQARVTC	Homo sapiens
800	599	Bradykinin B1 Receptor	P46663	799	NYHILASLRTREEVSR	Homo sapiens
801	599	Bradykinin B1 Receptor	P46663	800	RVRGPKDSKTTALILT	Homo sapiens
802	599	Bradykinin B1 Receptor	P46663	801	VGRLFRTKVWELYKQC	Homo sapiens
803	600	Bradykinin B2 Receptor	AAB02793.1	794	FRTMKEYSDEGHNVTAC	Homo sapiens
804	600	Bradykinin B2 Receptor	AAB02793.1	795	CTMQIMQVLRNNEMQKFKE	Homo sapiens
805	600	Bradykinin B2 Receptor	AAB02793.1	796	CQDERIIDVITQIASFM	Homo sapiens
806	600	Bradykinin B2 Receptor	AAB02793.1	797	CRSEPIQMENSMGTLRTS	Homo sapiens
807	635	Beta-1 adrenoceptor	AAA51667.1	1357	RVFREAQKQVKKIDSC	Homo sapiens
808	635	Beta-1 adrenoceptor	AAA51667.1	1358	CERRFLGGPARPPSPS	Homo sapiens
809	635	Beta-1 adrenoceptor	AAA51667.1	1359	ANGRAGKRRPSRLVALRE	Homo sapiens
810	635	Beta-1 adrenoceptor	AAA51667.1	1360	CARRAARRRHATHGDRPRAS	Homo sapiens
811	635	Beta-1 adrenoceptor	AAA51667.1	1361	CLARPGPPPSPGAASD	Homo sapiens
812	635	Beta-1 adrenoceptor	AAA51667.1	1362	CNGGAAADSDSSLDEP	Homo sapiens
813	640	Beta-2 adrenoceptor	NP_000015.1	2654	KRQLQKIDKSEGRFHV	Homo sapiens
814	640	Beta-2 adrenoceptor	NP_000015.1	2656	GEQSGYHVEQEKENKLLC	Homo sapiens
815	640	Beta-2 adrenoceptor	NP_000015.1	2662	APNRSHAPDHDVTQQR	Homo sapiens
816	640	Beta-2 adrenoceptor	NP_000015.1	2663	VPLVIMVFVYSRVFQE	Homo sapiens
817	643	Beta-3 adrenoceptor	P13945	1390	RGELGRFPPEESPPAP	Homo sapiens
818	643	Beta-3 adrenoceptor	P13945	1391	SRSLAPAPVGTCAPPE	Homo sapiens
819	643	Beta-3 adrenoceptor	P13945	1392	GVPACGRRPARLLPLRE	Homo sapiens
820	643	Beta-3 adrenoceptor	P13945	1393	PSGVPAARSSPAQPRLC	Homo sapiens
821	688	Opsin, blue-sensitive	NP_001699.1	1753	EEEFYLFKNISSVGPWDGPQ	Homo sapiens
822	688	Opsin, blue-sensitive	NP_001699.1	1754	CGPDWYTVGTKYRSESYT	Homo sapiens
823	688	Opsin, blue-sensitive	NP_001699.1	1755	NNRNHGLDLRLVTIPS	Homo sapiens
824	688	Opsin, blue-sensitive	NP_001699.1	1756	IMKMVCGKAMTDESDT	Homo sapiens
825	692	Bombesin Receptor Subtype-3	AAA35604.1	20	SITNDTESSSSVVSNDNTNK	Homo sapiens
826	692	Bombesin Receptor Subtype-3	AAA35604.1	21	KAVVKPLERQPSNAILKTC	Homo sapiens

827	692	Bombesin Receptor Subtype-3	AAA35604.1	22	RDPNKNMTFESCTSYPVSKK	Homo sapiens
828	692	Bombesin Receptor Subtype-3	AAA35604.1	23	RTLYKSTLNIPTEEQSHARK	Homo sapiens
829	692	Bombesin Receptor Subtype-3	AAA35604.1	24	KSFQKHFKAQLFCCKAERPE	Homo sapiens
830	692	Bombesin Receptor Subtype-3	NP_001718.1	2286	NKGWSGDNSPGIEALC	Homo sapiens
831	692	Bombesin Receptor Subtype-3	NP_001718.1	2287	QRQPHSPNQTLISITNDTE	Homo sapiens
832	692	Bombesin Receptor Subtype-3	NP_001718.1	2288	RPEPPVADTSLTTLAV	Homo sapiens
833	692	Bombesin Receptor Subtype-3	NP_001718.1	2289	SEISVTSFTGCSVKQAEDR	Homo sapiens
834	729	CXC Chemokine Receptor 5	P32302	1382	ELDRLDNYNDTSLVENHLC	Homo sapiens
835	729	CXC Chemokine Receptor 5	P32302	1383	SQGHHNNSLPRCTFSQE	Homo sapiens
836	729	CXC Chemokine Receptor 5	P32302	1384	CYVGVVHRLRQAQRRP	Homo sapiens
837	729	CXC Chemokine Receptor 5	P32302	1385	CQLFPSWRRSSLSESENA	Homo sapiens
838	735	C-C Chemokine Receptor 1	P32246	305	TEDYDTTTEFDYGDATPC	Homo sapiens
839	735	C-C Chemokine Receptor 1	P32246	1242	ASMPGLYFSKTQWEFTHHTC	Homo sapiens
840	735	C-C Chemokine Receptor 1	P32246	1243	CSLHFPHESLREWKLFQA	Homo sapiens
841	735	C-C Chemokine Receptor 1	P32246	1244	TILISVFQDFLFTHEC	Homo sapiens
842	737	C-C Chemokine Receptor 3	P51677	1386	CSALYPEDTVYSWRHF	Homo sapiens
843	737	C-C Chemokine Receptor 3	P51677	1387	PEFIFYETEELFEETLC	Homo sapiens
844	737	C-C Chemokine Receptor 3	P51677	1388	SSYQSILFGNDCERSK	Homo sapiens
845	737	C-C Chemokine Receptor 3	P51677	1389	GRYIPFLPSEKLERTS	Homo sapiens
846	737	C-C Chemokine Receptor 3	P51677	1751	DDVGLLCEKADTRALMAQFV	Homo sapiens
847	738	C-C Chemokine Receptor 4	P51680	306	MNATEVTDTTQDETVYNSYY	Mus musculus
848	738	C-C Chemokine Receptor 4	P51679	348	DESIYSNYYLYESIPKPC	Homo sapiens
849	738	C-C Chemokine Receptor 4	P51679	351	DTPSSSYTQSTMDHDLHD	Homo sapiens
850	738	C-C Chemokine Receptor 4	P51679	353	LETLVELEVLQDCTFE	Homo sapiens
851	738	C-C Chemokine Receptor 4	P51679	491	RNHTYCKTKYSLNSTTWK	Homo sapiens
852	741	C-C Chemokine Receptor 7	P32248	748	CQDEVTDDYIGDNTTVD	Homo sapiens
853	741	C-C Chemokine Receptor 7	P32248	846	PELLYSDLQRSSSEQAMRC	Homo sapiens
854	741	C-C Chemokine Receptor 7	P32248	847	QLRQWSSCRHIRRSSMSVE	Homo sapiens
855	741	C-C Chemokine Receptor 7	P32248	848	GVKFRNDLFKLFKDLGC	Homo sapiens
856	742	C-C Chemokine Receptor 8	P51685	359	PDIFSSPCDAELIQTNG	Homo sapiens

857	742	C-C Chemokine Receptor 8	P51685	360	KILHQLKRCQNHNKTKAIR	Homo sapiens
858	742	C-C Chemokine Receptor 8	P51685	362	SQIFNYLGRQMPRESC	Homo sapiens
859	742	C-C Chemokine Receptor 8	P51685	493	FVGEKFKKHLSEIFQKSC	Homo sapiens
860	752	CXC Chemokine Receptor 3	P49682	1371	ENFSSSYDYGENESDSC	Homo sapiens
861	752	CXC Chemokine Receptor 3	P49682	1372	CYAHILAVLLVSRGQRRLRA	Homo sapiens
862	752	CXC Chemokine Receptor 3	P49682	1373	MVLEVSDHQVLNDAEVAALL	Homo sapiens
863	752	CXC Chemokine Receptor 3	P49682	1374	CPNQRGLQRQPSSSRRD	Homo sapiens
864	753	CXC Chemokine Receptor 4	P30991	1376	TEEMGSGDYDSMKEPC	Homo sapiens
865	753	CXC Chemokine Receptor 4	P30991	1377	KKLRSMTDKYRLHLSVAD	Homo sapiens
866	753	CXC Chemokine Receptor 4	P30991	1380	CIIISKLSHSKGHQKRKALK	Homo sapiens
867	753	CXC Chemokine Receptor 4	P30991	1381	KILSKGKRGGHSSVSTE	Homo sapiens
868	755	Complement Component 3a Receptor 1	AAC50657.1	25	ENRSLENIVQPPGEMNDRLD	Homo sapiens
869	755	Complement Component 3a Receptor 1	AAC50657.1	26	KIPSGFPIEDHETSPLDNSD	Homo sapiens
870	755	Complement Component 3a Receptor 1	AAC50657.1	27	RKKARQSIQGILEAAFSEE	Homo sapiens
871	755	Complement Component 3a Receptor 1	AAC50657.1	28	PQTFQRPSADSLPRGSARLT	Homo sapiens
872	758	Complement Component 5a Receptor 1	P21730	811	DLNTPVDKTSNTLRVPD	Homo sapiens
873	758	Complement Component 5a Receptor 1	P21730	812	CGVDYSHDKRRERAVAIVRL	Homo sapiens
874	758	Complement Component 5a Receptor 1	P21730	813	CYTFILLRTWSRRATRSTK	Homo sapiens
875	758	Complement Component 5a Receptor 1	P21730	814	QGRLRKSLPSLLRNVLTE	Homo sapiens
876	767	Calcitonin Receptor-like Receptor	Q16602	841	AELEESPEDSIQLGVTR	Homo sapiens
877	767	Calcitonin Receptor-like Receptor	Q16602	843	EFVLIPWRPEGKIAEEV	Homo sapiens
878	767	Calcitonin Receptor-like Receptor	Q16602	844	RRNWNQYKIQFGNSFSNSE	Homo sapiens
879	767	Calcitonin Receptor-like Receptor	Q16602	845	RSASYTVSTISDGPGYSHDC	Homo sapiens
880	832	Cannabinoid Receptor 1	AAB18200.1	29	NDIQYEDIKGDMASKLG	Homo sapiens
881	832	Cannabinoid Receptor 1	AAB18200.1	30	KENEENIQCGENFMDIE	Homo sapiens
882	832	Cannabinoid Receptor 1	AAB18200.1	31	EDGKVQVTRPDQARMDIR	Homo sapiens

883	832	Cannabinoid Receptor 1	AAB18200.1	32	CEGTAQPLDNSMGDSD	Homo sapiens
884	832	Cannabinoid Receptor 1	AAB18200.1	274	MKSILDGLADTTFR	Homo sapiens
885	832	Cannabinoid Receptor 1	AAB18200.1	297	NKSLSSFKENEENIQC	Homo sapiens
886	833	Cannabinoid Receptor 2	CAA52376.1	33	KDGLDSNPMKDYMILSGPQK	Homo sapiens
887	833	Cannabinoid Receptor 2	CAA52376.1	34	QDRQVPGMARMRLDVRLAKT	Homo sapiens
888	833	Cannabinoid Receptor 2	CAA52376.1	35	KEEAPRSSVTETEADGK	Homo sapiens
889	833	Cannabinoid Receptor 2	CAA52376.1	36	RSGEIRSSAHHCLAHWKKC	Homo sapiens
890	922	Leukocyte Antigen CD97	NP_001775.1	2644	GRDPPAKDVMPGPRQELLC	Homo sapiens
891	922	Leukocyte Antigen CD97	NP_001775.1	2646	CSPGYEPVSGAKTFKN	Homo sapiens
892	922	Leukocyte Antigen CD97	NP_001775.1	2647	FSSFSEIITTPTETC	Homo sapiens
893	922	Leukocyte Antigen CD97	NP_001775.1	2648	CRPGWKPRHGIPNNQK	Homo sapiens
894	922	Leukocyte Antigen CD97	NP_001775.1	2649	DGEAGRDPPAKDVMPGPR	Homo sapiens
895	922	Leukocyte Antigen CD97	NP_001775.1	2650	ANASLNLHSKKQAELE	Homo sapiens
896	922	Leukocyte Antigen CD97	NP_001775.1	2651	RLSAVNSIFLSHNNTKE	Homo sapiens
897	922	Leukocyte Antigen CD97	NP_001775.1	2652	KLTQKFSEINPDMKKL	Homo sapiens
898	922	Leukocyte Antigen CD97	NP_001775.1	2680	KLVDELMEAPGDVEAL	Homo sapiens
899	922	Leukocyte Antigen CD97	NP_001775.1	2681	RFFDKVQDLGRDSKTSS	Homo sapiens
900	941	EMR1 Hormone Receptor	Q14246	1180	RAEYLDIESKVINKEC	Homo sapiens
901	941	EMR1 Hormone Receptor	Q14246	2675	CVMHSWEGHIRPTRKPNTK	Homo sapiens
902	941	EMR1 Hormone Receptor	Q14246	2677	CLLNGQVREEYKRWITGKTKP	Homo sapiens
903	941	EMR1 Hormone Receptor	Q14246	2678	CLLNGQVREEYKRWITGK	Homo sapiens
904	941	EMR1 Hormone Receptor	Q14246	2679	SGHLSCQGLKASCE	Homo sapiens
905	965	G Protein-Coupled Receptor GPR30	CAA67133.1	1183	GTALANGTGELSEHQQ	Homo sapiens
906	965	G Protein-Coupled Receptor GPR30	CAA67133.1	1184	ADSLIEVFNLHERYYD	Homo sapiens
907	965	G Protein-Coupled Receptor GPR30	CAA67133.1	1185	VRAHRHRGLRPRRQKA	Homo sapiens
908	965	G Protein-Coupled Receptor GPR30	CAA67133.1	1186	DKLRLYIEQKTNLPALNRFC	Homo sapiens
909	978	Cholecystokinin A Receptor	P32238	820	AKERKPSTTSSGKYEDSDGC	Homo sapiens
910	978	Cholecystokinin A Receptor	P32238	821	CYLQKTRPPRKLELRQ	Homo sapiens
911	978	Cholecystokinin A Receptor	P32238	822	SANAWRAYDTASAERR	Homo sapiens
912	978	Cholecystokinin A Receptor	P32238	823	CPNPGPPGARGEVGEEE	Homo sapiens
913	1103	Corticotropin releasing factor Receptor 2	Q13324	453	CEPILDDKQRKYDLHYRIAL	Homo sapiens
914	1103	Corticotropin releasing	Q13324	502	QLVDHEVHESNEVWC	Homo sapiens

		factor Receptor 2				
915	1103	Corticotropin releasing factor Receptor 2	Q13324	505	DPEGPYSYCNTTLDQIGTCW	Homo sapiens
916	1103	Corticotropin releasing factor Receptor 2	LR43	507	ALLEQYCHTIMTLTNLSG	Homo sapiens
917	1240	Dopamine Receptor D1	CAA41734.1	41	SSHHEPRGSISKEC	Homo sapiens
918	1240	Dopamine Receptor D1	CAA41734.1	42	KAKPTSPSDGNATSLAETID	Homo sapiens
919	1240	Dopamine Receptor D1	CAA41734.1	43	CSQPESSFKMSFKRE	Homo sapiens
920	1240	Dopamine Receptor D1	CAA41734.1	44	EDLKKEEAAGIARPLEK	Homo sapiens
921	1241	Dopamine Receptor D5	P21918	1407	PWEEDFWEPDVNAENC	Homo sapiens
922	1241	Dopamine Receptor D5	P21918	1408	CAPDTSLRASIKKETK	Homo sapiens
923	1241	Dopamine Receptor D5	P21918	1409	PNAVTPGNREVDNDEE	Homo sapiens
924	1241	Dopamine Receptor D5	P21918	1410	QTSPDGDPVAESVWELDC	Homo sapiens
925	1242	Dopamine Receptor D2	P14416	1403	KRSSRAFRAHLRAPLKGNC	Homo sapiens
926	1242	Dopamine Receptor D2	P14416	1404	CTVIMKSNGSFPVNRRRV	Homo sapiens
927	1242	Dopamine Receptor D2	P14416	1405	KPEKNGHAKDHPKIAK	Homo sapiens
928	1242	Dopamine Receptor D2	P14416	1406	GKTRTSLKTMSRRKLSQQKE	Homo sapiens
929	1243	Dopamine Receptor D3	P35462	1398	KQRRRKRILTRQNSQC	Homo sapiens
930	1243	Dopamine Receptor D3	P35462	1399	CNSVRPGFPQQTLSPDP	Homo sapiens
931	1243	Dopamine Receptor D3	P35462	1400	CQDTALGGPGFQERGGE	Homo sapiens
932	1243	Dopamine Receptor D3	P35462	1401	KREEKTRNSLSPTIAP	Homo sapiens
933	1243	Dopamine Receptor D3	P35462	1402	STSLKLGPLQPRGVPLRE	Homo sapiens
934	1244	Dopamine Receptor D4	P21917	1394	VAVAVPLRYNRQGGSR	Homo sapiens
935	1244	Dopamine Receptor D4	P21917	1395	EVARRAKLHGRAPRRP	Homo sapiens
936	1244	Dopamine Receptor D4	P21917	1396	PPSPTPPAPRLPQDPC	Homo sapiens
937	1244	Dopamine Receptor D4	P21917	1397	PPQTPPQTRRRRRAKITGRE	Homo sapiens
938	1267	Opioid Receptor, delta 1 (OPRD1)	AAA18789.1	222	DAYPSAFPSAGANASGP	Homo sapiens
939	1267	Opioid Receptor, delta 1 (OPRD1)	AAA18789.1	224	LVDIDRRDPLVVAALHLC	Homo sapiens
940	1267	Opioid Receptor, delta 1 (OPRD1)	AAA18789.1	225	KRCFRQLCRKPCGRPD	Homo sapiens
941	1267	Opioid Receptor, delta 1 (OPRD1)	AAA18789.1	226	SRPREATARERVTAC	Homo sapiens
942	1424	Duffy Antigen	AAC50055.1	1411	TENSSQLDFEDVWNSS	Homo sapiens
943	1424	Duffy Antigen	AAC50055.1	1412	NDSFPDGDYDANLEAAAPC	Homo sapiens
944	1424	Duffy Antigen	AAC50055.1	1413	CHASLGHRLGAGQVPG	Homo sapiens

945	1424	Duffy Antigen	AAC50055.1	1415	FGAKGLKKALGMGPGP	Homo sapiens
946	1451	EBV-Induced Gene 2	AAA35924.1	45	KQEAERITCMEYPNFEET	Homo sapiens
947	1451	EBV-Induced Gene 2	AAA35924.1	46	KLFRTAKQNPLTEKSGVNKK	Homo sapiens
948	1451	EBV-Induced Gene 2	AAA35924.1	47	KSAPEENSREMTETQM	Homo sapiens
949	1451	EBV-Induced Gene 2	AAA35924.1	48	CKGYKRKVMRMLKRQ	Homo sapiens
950	1486	Endothelin B Receptor	BAA14398.1	54	GEERGFPPDRATPLLQTAE	Homo sapiens
951	1486	Endothelin B Receptor	BAA14398.1	55	RSLAPAEVPKGDRTAGSP	Homo sapiens
952	1486	Endothelin B Receptor	BAA14398.1	56	PRTISPPPCQGPIEIKE	Homo sapiens
953	1486	Endothelin B Receptor	BAA14398.1	57	EEKQSLEEKQSCLKFKAND	Homo sapiens
954	1488	Endothelin A Receptor	AAB25530.1	49	RYSTNLSNHVDDFTTFRGTE	Homo sapiens
955	1488	Endothelin A Receptor	AAB25530.1	50	NRRNGSLRIALSEHLK	Homo sapiens
956	1488	Endothelin A Receptor	AAB25530.1	51	EYRGEQHKTCMLNATSK	Homo sapiens
957	1488	Endothelin A Receptor	AAB25530.1	53	KNHDQNNHNTDRSSHKD	Homo sapiens
958	1598	Calcium-Sensing Receptor (CASR)	P41180	1425	RPGIEKFREEAEERDIC	Homo sapiens
959	1598	Calcium-Sensing Receptor (CASR)	P41180	1426	CHLQEGAKGPLPVDTFLR	Homo sapiens
960	1598	Calcium-Sensing Receptor (CASR)	P41180	1427	GHEESGDRFSNSSTAFRPLC	Homo sapiens
961	1598	Calcium-Sensing Receptor (CASR)	P41180	1428	KGIIEGEPTCCFECVECPDG	Homo sapiens
962	1598	Calcium-Sensing Receptor (CASR)	P41180	1429	CSTAAHAFKVAARATLRRSN	Homo sapiens
963	1598	Calcium-Sensing Receptor (CASR)	P41180	1430	PQKNAMAHRNSTHQNSLE	Homo sapiens
964	1598	Calcium-Sensing Receptor (CASR)	P41180	1431	RPEVEDPEELSPALVVSSSQ	Homo sapiens
965	1676	Formyl Peptide Receptor-Like Receptor	NP_001453.1	1878	ASWGGTPEERLKVAITMLTA	Homo sapiens
966	1676	Formyl Peptide Receptor-Like Receptor	NP_001453.1	1879	SEDSAPTNDTAANSAS	Homo sapiens
967	1676	Formyl Peptide Receptor-Like Receptor	NP_001453.1	1880	SYESAGYTVLRILPLVVL	Homo sapiens
968	1676	Formyl Peptide Receptor-Like Receptor	NP_001453.1	1881	PVFLFLTTVTIPNGD	Homo sapiens
969	1676	Formyl Peptide Receptor-Like Receptor	NP_001453.1	2612	EERLKVAITMLTARGIIRFV	Homo sapiens
970	1676	Formyl Peptide Receptor-	NP_001453.1	2613	ERALSEDSAPTNDTAANSAS	Homo sapiens

		Like Receptor				
971	1681	Follicle Stimulating Hormone Receptor	AAA52477.1	58	QESKVTEIPSDLPRNAIELR	Homo sapiens
972	1681	Follicle Stimulating Hormone Receptor	AAA52477.1	59	DVLEVIEADVFSNLPK	Homo sapiens
973	1681	Follicle Stimulating Hormone Receptor	AAA52477.1	60	RNGHCSSAPRVTSGSTY	Homo sapiens
974	1681	Follicle Stimulating Hormone Receptor	AAA52477.1	61	RGQRSSLAEDNESSYSRGFD	Homo sapiens
975	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2231	CHHRICHCSNRVFLCQE	Homo sapiens
976	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2232	LRVIQKGAFSGFGDLEK	Homo sapiens
977	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2233	LYVMSLLVLNVLAFVVIC	Homo sapiens
978	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2234	CNKSILRQEVDYMTQARGQR	Homo sapiens
979	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2236	SDNNNLEELPNDVFHGA	Homo sapiens
980	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2238	KLVALMEASLTYPSHC	Homo sapiens
981	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2241	SFESVILWLNKNGIQEIHNC	Homo sapiens
982	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2248	IHSLQKVLLDIQDNINIHT	Homo sapiens
983	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2250	KANNLLYITPEAFQNLP	Homo sapiens
984	1681	Follicle Stimulating Hormone Receptor	NP_000136.1	2251	CYEMQAQIYRTETSSTVH	Homo sapiens
985	1726	G Protein-Coupled Receptor RDC1	AAA62370.1	1437	TNTPSSRKKMVRRVVC	Homo sapiens
986	1726	G Protein-Coupled Receptor RDC1	AAA62370.1	1439	ARAISASSDQEKHSSRK	Homo sapiens
987	1726	G Protein-Coupled Receptor RDC1	AAA62370.1	1440	KYSAKTGLTKLIDASRVSET	Homo sapiens
988	1726	G Protein-Coupled Receptor RDC1	AAA62370.1	1893	PDTYYLKTVTSASNNETYC	Homo sapiens
989	1762	Galanin Receptor GalR1	AAA50767.1	192	GNSLVITVLARSKPGKPR	Homo sapiens
990	1762	Galanin Receptor GalR1	AAA50767.1	193	PRASNQTFCWEQWPDPRHKK	Homo sapiens

991	1762	Galanin Receptor GalR1	AAA50767.1	194	KKLKNMSKKSEASKKKTAQ	Homo sapiens
992	1762	Galanin Receptor GalR1	AAA50767.1	195	GNSLVITVLARSKP	Homo sapiens
993	1762	Galanin Receptor GalR1	AAA50767.1	196	RKDSHLSDTKENKSRID	Homo sapiens
994	1808	Gastric Inhibitory Polypeptide Receptor	P48546	1250	QTAGELYQRWERYRREC	Homo sapiens
995	1808	Gastric Inhibitory Polypeptide Receptor	P48546	1251	CENPEKNEAFLDQRLILER	Homo sapiens
996	1808	Gastric Inhibitory Polypeptide Receptor	P48546	1253	CRLRRSLGEEQRQLPERAFR	Homo sapiens
997	1808	Gastric Inhibitory Polypeptide Receptor	P48546	1276	PTSRGLSSGTLPGPGNEA	Homo sapiens
998	1813	Gastrin-Releasing Peptide Receptor	P30550	829	CNISSHSADLPVNDDWSHPG	Homo sapiens
999	1813	Gastrin-Releasing Peptide Receptor	P30550	830	SDLHPFHEESTNQTFISC	Homo sapiens
1000	1813	Gastrin-Releasing Peptide Receptor	P30550	831	YNLPVEGNIHVKKQIES	Homo sapiens
1001	1813	Gastrin-Releasing Peptide Receptor	P30550	832	CQPGLIIRSHSTGRSTT	Homo sapiens
1002	1814	Cholecystokinin B Receptor	Q16144	1281	CEPPRIRGAGTRELELAIR	Homo sapiens
1003	1814	Cholecystokinin B Receptor	Q16144	1282	RVRNQGGLPGAVHQNGRC	Homo sapiens
1004	1814	Cholecystokinin B Receptor	Q16144	1283	LRFDGDSDSDSQSRVR	Homo sapiens
1005	1814	Cholecystokinin B Receptor	Q16144	1284	CRPETGAVGKDSDGCY	Homo sapiens
1006	1834	Glucagon Receptor	P47871	837	DGLLRTRYSQKIGDDL	Homo sapiens
1007	1834	Glucagon Receptor	P47871	838	CGPDGQWVRGPRGQPWRDAS	Homo sapiens
1008	1834	Glucagon Receptor	P47871	839	CQMDGEEIEVQKEVAKMYSS	Homo sapiens
1009	1834	Glucagon Receptor	P47871	840	TSNHRASSSPGHGPPSKE	Homo sapiens
1010	1925	Gonadotropin-Releasing Hormone Receptor	AAA35917.1	206	KLQKWTQKKEKGKKLSRMK	Homo sapiens
1011	1925	Gonadotropin-Releasing Hormone Receptor	AAA35917.1	207	DRSLAITRPLALKSNSKVGQ	Homo sapiens
1012	1925	Gonadotropin-Releasing Hormone Receptor	AAA35917.1	208	RMIHLADSSGQTKVFSQC	Homo sapiens
1013	1925	Gonadotropin-Releasing Hormone Receptor	AAA35917.1	209	DPHELQLNQSKNNIPRARLK	Homo sapiens
1014	1945	Opsin, green-sensitive	NP_000504.1	1746	QRLAGRHPQDSYEDSTQSS	Homo sapiens
1015	1945	Opsin, green-sensitive	NP_000504.1	1747	CKPFGNVRFDAKLAIVG	Homo sapiens
1016	1945	Opsin, green-sensitive	NP_000504.1	1748	KTSCGPDVFSGSSYPGVQS	Homo sapiens

1017	1945	Opsin, green-sensitive	NP_000504.1	1750	CILQLFGKKVDDGSELSS	Homo sapiens
1018	1945	Opsin, green-sensitive	NP_000504.1	1767	STRGPFEGPNYHIAPR	Homo sapiens
1019	1945	Opsin, green-sensitive	NP_000504.1	1768	TNGLVLAATMKFKKLR	Homo sapiens
1020	1945	Opsin, green-sensitive	NP_000504.1	1769	ELSSASKTEVSSVSSVSP	Homo sapiens
1021	1951	Growth Hormone Secretagogue Receptor	Q92847	581	ADLDWDASPGNDSLGD	Homo sapiens
1022	1951	Growth Hormone Secretagogue Receptor	Q92847	582	GVEHENGTDPWDTNEC	Homo sapiens
1023	1951	Growth Hormone Secretagogue Receptor	Q92847	583	KLWRRRRGDAVVGASL	Homo sapiens
1024	1951	Growth Hormone Secretagogue Receptor	Q92847	584	SQRKLSTLKDESSRAW	Homo sapiens
1025	1954	Growth Hormone-Releasing Hormone Receptor	Q02643	833	REDESACLQAAEEMPNTTLG	Homo sapiens
1026	1954	Growth Hormone-Releasing Hormone Receptor	Q02643	834	CPDFFSHFSSESGAVKRD	Homo sapiens
1027	1954	Growth Hormone-Releasing Hormone Receptor	Q02643	835	VRKLEPAQGSLHTQSQ	Homo sapiens
1028	1954	Growth Hormone-Releasing Hormone Receptor	Q02643	836	RTEISRKWHGHDPELL	Homo sapiens
1029	2120	Histamine H1 Receptor	P35367	1167	GWNHFMQQTSVRREDKC	Homo sapiens
1030	2120	Histamine H1 Receptor	P35367	1168	CQHRELINRSLPSFSEIKLR	Homo sapiens
1031	2120	Histamine H1 Receptor	P35367	1169	AGGGSVLKSPSQTPKE	Homo sapiens
1032	2120	Histamine H1 Receptor	P35367	1170	KSPVVFSQEDDREVDKLYC	Homo sapiens
1033	2120	Histamine H1 Receptor	P35367	1171	TAPGKGKLRSGSNTGLD	Homo sapiens
1034	2120	Histamine H1 Receptor	P35367	1172	KRLRSHSRQYVSGLHMNRE	Homo sapiens
1035	2121	Histamine H2 Receptor	P25021	1173	NSRNETSKGNHTTSKC	Homo sapiens
1036	2121	Histamine H2 Receptor	P25021	1174	CITYYRIFKVARDQAKR	Homo sapiens
1037	2121	Histamine H2 Receptor	P25021	1175	RDQAKRINHISSWKAA	Homo sapiens
1038	2121	Histamine H2 Receptor	P25021	1176	TAFVYRGLRGDDAINE	Homo sapiens
1039	2121	Histamine H2 Receptor	P25021	1177	HKTSLRSNASQLSRTQSRE	Homo sapiens
1040	2783	Opioid Receptor, kappa 1 (OPRK1)	AAA63906.1	227	DSNGSAGSEDAQLEPA	Homo sapiens
1041	2783	Opioid Receptor, kappa 1 (OPRK1)	AAA63906.1	228	KVREDVDVIECSLQFPDDD	Homo sapiens
1042	2783	Opioid Receptor, kappa 1 (OPRK1)	AAA63906.1	229	RNTVQDPAYLRDIDGMNK	Homo sapiens
1043	2783	Opioid Receptor, kappa 1	AAA63906.1	230	CFPLKMRMERQSTSRVRN	Homo sapiens

		(OPRK1)				
1044	2964	Luteinizing Hormone/Choriogonadotropin Receptor	Q14751	1432	CNTGIRKFPDVTKVFSSESN	Homo sapiens
1045	2964	Luteinizing Hormone/Choriogonadotropin Receptor	Q14751	1433	KMHNGAFRGATGPKTLD	Homo sapiens
1046	2964	Luteinizing Hormone/Choriogonadotropin Receptor	Q14751	1434	CESTVRKVSNKTLYSS	Homo sapiens
1047	2964	Luteinizing Hormone/Choriogonadotropin Receptor	Q14751	1435	FAVRNPELMATNKDTK	Homo sapiens
1048	2964	Luteinizing Hormone/Choriogonadotropin Receptor	Q14751	1436	CKRRAELYRRKDFSAYTSN	Homo sapiens
1049	2976	Lysophosphatidic Acid Receptor Edg2	AAC51139.1	210	ERHITVFRMQLHTRMSNRR	Homo sapiens
1050	2976	Lysophosphatidic Acid Receptor Edg2	AAC51139.1	211	RQRTMRMSRHSSGPRRNRD	Homo sapiens
1051	2976	Lysophosphatidic Acid Receptor Edg2	AAC51139.1	212	KHLATEWNTVSKLVM	Homo sapiens
1052	2976	Lysophosphatidic Acid Receptor Edg2	AAC51139.1	213	ENPTGPTESSDRSASSLN	Homo sapiens
1053	3038	G Protein-Coupled Receptor MRG	AAB21255.1	184	ESQISLSCSLCLHSGDQEAQ	Homo sapiens
1054	3038	G Protein-Coupled Receptor MRG	AAB21255.1	185	QQQKATRVYAVVQISAPM	Homo sapiens
1055	3038	G Protein-Coupled Receptor MRG	AAB21255.1	186	DKPEVGRNKKAAGIDPME	Homo sapiens
1056	3038	G Protein-Coupled Receptor MRG	AAB21255.1	187	EQPHSTQHVENLLPREHRVD	Homo sapiens
1057	3057	Melanocortin 3 Receptor (MC3R)	P41968	451	RLHVKRIAALPPADGVAPQ	Homo sapiens
1058	3057	Melanocortin 3 Receptor (MC3R)	P41968	452	DPLIYAFRSLELRNTFRE	Homo sapiens
1059	3057	Melanocortin 3 Receptor (MC3R)	P41968	562	QAPFFSNQSSSAFCEQVFI	Homo sapiens
1060	3057	Melanocortin 3 Receptor	P41968	563	IVHSDYLTFEDQFIQHMDNI	Homo sapiens

		(MC3R)				
1061	3058	Melanocortin 4 Receptor (MC4R)	AAB33341.1	1032	HSNASESLGKGYSDGGC	Homo sapiens
1062	3058	Melanocortin 4 Receptor (MC4R)	AAB33341.1	1033	KRIAVLPGTGAIRQGA	Homo sapiens
1063	3058	Melanocortin 4 Receptor (MC4R)	AAB33341.1	1035	NSTDTDAQSFTVNIDN	Homo sapiens
1064	3058	Melanocortin 4 Receptor (MC4R)	AAB33341.1	1469	NSTHRGMHTSLHLWNRSSYR	Homo sapiens
1065	3059	Melanocortin 5 Receptor (MC5R)	P33032	1022	ATEGNLSGPNVKNKSSPC	Homo sapiens
1066	3059	Melanocortin 5 Receptor (MC5R)	P33032	1024	NKHLVIADAFVRHIDN	Homo sapiens
1067	3059	Melanocortin 5 Receptor (MC5R)	P33032	1025	MNSSFHLHFLDLNLNAT	Homo sapiens
1068	3059	Melanocortin 5 Receptor (MC5R)	P33032	1026	RYHHIMTARRSGAIIAG	Homo sapiens
1069	3061	Melanocortin 1 Receptor (MC1R)	AAD41352.1	1036	QGSQRRLLGSLNSTPT	Homo sapiens
1070	3061	Melanocortin 1 Receptor (MC1R)	AAD41352.1	1038	EAGALVARAAVLQQLD	Homo sapiens
1071	3061	Melanocortin 1 Receptor (MC1R)	AAD41352.1	1039	ALRYHSIVTLPRARQA	Homo sapiens
1072	3061	Melanocortin 1 Receptor (MC1R)	AAD41352.1	1040	CQHAQGIARLHKRQRP	Homo sapiens
1073	3079	Melatonin Receptor type 1a	AAB17720.1	214	HSLKYDKLYSSKNSLC	Homo sapiens
1074	3079	Melatonin Receptor type 1a	AAB17720.1	215	CTARVFFVDSSNDVADR	Homo sapiens
1075	3079	Melatonin Receptor type 1a	AAB17720.1	216	QVRQRVKPDRKPKLKP	Homo sapiens
1076	3079	Melatonin Receptor type 1a	AAB17720.1	217	DSSNDVADRVKWKPSPLMTN	Homo sapiens
1077	3080	Melatonin Receptor type 1b	P49286	930	AVRPGWSGAGSARPSR	Homo sapiens
1078	3080	Melatonin Receptor type 1b	P49286	931	LVAIFYDGWALGEEHC	Homo sapiens
1079	3080	Melatonin Receptor type 1b	P49286	932	LVLQARRKAKPESRLC	Homo sapiens
1080	3080	Melatonin Receptor type 1b	P49286	933	CIQDASKGSHAEGLQSPA	Homo sapiens
1081	3080	Melatonin Receptor type 1b	P49286	934	QEMAPQIPEGLFVTSY	Homo sapiens
1082	3081	Melatonin-Related Receptor	Q13585	751	LAARDPAGQNPDNQLAE	Homo sapiens
1083	3081	Melatonin-Related Receptor	Q13585	752	ARARAHARDQAREQDRAHAC	Homo sapiens
1084	3081	Melatonin-Related Receptor	Q13585	753	DRASGHPKPHSRSSSAY	Homo sapiens
1085	3081	Melatonin-Related Receptor	Q13585	754	HPKPAAADNPELSASHC	Homo sapiens

1086	3081	Melatonin-Related Receptor	Q13585	755	DDSDLPESASSPAAGPT	Homo sapiens
1087	3093	Metabotropic Glutamate Receptor 1	Q13255	879	DDYKIQMNKSGVVRSVC	Homo sapiens
1088	3093	Metabotropic Glutamate Receptor 1	Q13255	880	CRSNTFLNIFRRKKAG	Homo sapiens
1089	3093	Metabotropic Glutamate Receptor 1	Q13255	881	DTSTKTLYNVEEEEDA	Homo sapiens
1090	3093	Metabotropic Glutamate Receptor 1	Q13255	882	ERFKLLQEYVYEHERE	Homo sapiens
1091	3094	Metabotropic Glutamate Receptor 2	Q14416	891	DFVRASLSRGADGSRHIC	Homo sapiens
1092	3094	Metabotropic Glutamate Receptor 2	Q14416	892	CVATSEKVGRAMSRAAFEG	Homo sapiens
1093	3094	Metabotropic Glutamate Receptor 2	Q14416	893	CAAHSLRAVPFEQESK	Homo sapiens
1094	3094	Metabotropic Glutamate Receptor 2	Q14416	894	CDAMRPVNGRRLYKDF	Homo sapiens
1095	3094	Metabotropic Glutamate Receptor 2	Q14416	895	DAPFRPADTHNEVRFDR	Homo sapiens
1096	3094	Metabotropic Glutamate Receptor 2	Q14416	896	GKETAPERREVVTLRC	Homo sapiens
1097	3095	Metabotropic Glutamate Receptor 3	CAA54796.1	897	GGLFPINEKGTGTEEC	Homo sapiens
1098	3095	Metabotropic Glutamate Receptor 3	CAA54796.1	898	EFVRASLTKVDEAEYMC	Homo sapiens
1099	3095	Metabotropic Glutamate Receptor 3	CAA54796.1	899	RSNIRKSYDSVIRELL	Homo sapiens
1100	3095	Metabotropic Glutamate Receptor 3	CAA54796.1	900	CDKHLAIDSSNYEQES	Homo sapiens
1101	3095	Metabotropic Glutamate Receptor 3	CAA54796.1	902	GTRRYTLAEKRETVILKC	Homo sapiens
1102	3096	Metabotropic Glutamate Receptor 4	Q14833	909	PSSLGKPKGHPHMNSIRID	Homo sapiens
1103	3096	Metabotropic Glutamate Receptor 4	Q14833	910	CGSGGPPIITKPERVVG	Homo sapiens
1104	3096	Metabotropic Glutamate Receptor 4	Q14833	911	CKLSRHALKKGSHVKK	Homo sapiens
1105	3096	Metabotropic Glutamate Receptor 4	Q14833	913	CPRMDPVDGTQLLKYI	Homo sapiens

1106	3096	Metabotropic Glutamate Receptor 4	Q14833	914	RIERMHWPGSGQQLPRSIC	Homo sapiens
1107	3097	Metabotropic Glutamate Receptor 5	P41594	883	KDYFDYINVGSWDNGEL	Homo sapiens
1108	3097	Metabotropic Glutamate Receptor 5	P41594	884	KMDDDEVWSKKSNIIRSVC	Homo sapiens
1109	3097	Metabotropic Glutamate Receptor 5	P41594	885	GETLRYKDRRLAQHKSEIEC	Homo sapiens
1110	3097	Metabotropic Glutamate Receptor 5	P41594	886	NPNQTAVIKPFPKSTE	Homo sapiens
1111	3097	Metabotropic Glutamate Receptor 5	P41594	887	KALYDVAEAEEHFPAPA	Homo sapiens
1112	3097	Metabotropic Glutamate Receptor 5	P41594	888	RSPSPISTLSHRAGSASRTD	Homo sapiens
1113	3097	Metabotropic Glutamate Receptor 5	P41594	889	RESPAAGPEAAAAKPD	Homo sapiens
1114	3098	Metabotropic Glutamate Receptor 6	O15303	903	QALIRGRGDGDEVGVRC	Homo sapiens
1115	3098	Metabotropic Glutamate Receptor 6	O15303	904	KLTSSGTQSDDSTRKC	Homo sapiens
1116	3098	Metabotropic Glutamate Receptor 6	O15303	905	DVEALQWSGDPHEVPSSLC	Homo sapiens
1117	3098	Metabotropic Glutamate Receptor 6	O15303	906	RFQVDEFTCEACPGDM	Homo sapiens
1118	3098	Metabotropic Glutamate Receptor 6	O15303	907	GARPPHSVIDYEEQRT	Homo sapiens
1119	3099	Metabotropic Glutamate Receptor 7	Q14831	917	CIAQSVRIPQERKDRTIDFD	Homo sapiens
1120	3099	Metabotropic Glutamate Receptor 7	Q14831	918	NDEDIKQILAAAKRAD	Homo sapiens
1121	3099	Metabotropic Glutamate Receptor 7	Q14831	921	NIEDMQWGKGVREIPASVC	Homo sapiens
1122	3099	Metabotropic Glutamate Receptor 7	Q14831	2693	IKQLLDTPNSRAVVI	Homo sapiens
1123	3099	Metabotropic Glutamate Receptor 7	Q14831	2694	DPPNIIIDYDEHKTM	Homo sapiens
1124	3100	Metabotropic Glutamate Receptor 8	O00222	922	CANGDPPIFTKPDKIS	Homo sapiens
1125	3100	Metabotropic Glutamate	O00222	923	CPRMSTIDGKELLGYIRA	Homo sapiens

		Receptor 8				
1126	3100	Metabotropic Glutamate Receptor 8	O00222	924	KVEDMQWAHREHTHPASVC	Homo sapiens
1127	3100	Metabotropic Glutamate Receptor 8	O00222	925	CESLETNTSSTKTTYISYS	Homo sapiens
1128	3100	Metabotropic Glutamate Receptor 8	O00222	1894	KFYWILTMMQRTHSQEYAHS	Homo sapiens
1129	3212	Opioid mu-type Receptor	AAA20580.1	231	DGNLSDPCGPNRTNLGGRDS	Homo sapiens
1130	3212	Opioid mu-type Receptor	AAA20580.1	232	DRTNHQLENLEAETAPLP	Homo sapiens
1131	3212	Opioid mu-type Receptor	AAA20580.1	233	IKALVTIPETTFQTVS	Homo sapiens
1132	3212	Opioid mu-type Receptor	AAA20580.1	234	RIRQNTRDHPSTANTVDR	Homo sapiens
1133	3223	Muscarinic acetylcholine Receptor M1	AAA35686.1	1325	SERSQPGAEGSPETPPGRC	Homo sapiens
1134	3223	Muscarinic acetylcholine Receptor M1	AAA35686.1	1326	CRAPRLLQAYSWKEEE	Homo sapiens
1135	3223	Muscarinic acetylcholine Receptor M1	AAA35686.1	1327	SSEGEEPGSEVVIKMP	Homo sapiens
1136	3223	Muscarinic acetylcholine Receptor M1	AAA35686.1	1328	KQPPRSSPNTVKRPTKKGRD	Homo sapiens
1137	3223	Muscarinic acetylcholine Receptor M1	AAA35686.1	1329	CRWDKRRWRKIPKRPGS	Homo sapiens
1138	3224	Muscarinic acetylcholine Receptor M2	AAA51570.1	1330	EHNKIQNGKAPRDPVTENC	Homo sapiens
1139	3224	Muscarinic acetylcholine Receptor M2	AAA51570.1	1331	DSTSVSAVASNMRDDE	Homo sapiens
1140	3224	Muscarinic acetylcholine Receptor M2	AAA51570.1	1332	ENTVSTSLGHSKDENSKQTC	Homo sapiens
1141	3224	Muscarinic acetylcholine Receptor M2	AAA51570.1	1333	DEKQNIVARKIVKMTK	Homo sapiens
1142	3224	Muscarinic acetylcholine Receptor M2	AAA51570.1	1831	RIKKDKKEPVANQDPVSPSL	Homo sapiens
1143	3226	Muscarinic acetylcholine Receptor M4	AAA51571.1	218	SRSRVHKHRPEGPKEKKAKT	Homo sapiens
1144	3226	Muscarinic acetylcholine Receptor M4	AAA51571.1	219	KKPRPGGRPGGLRNGKLEEA	Homo sapiens
1145	3226	Muscarinic acetylcholine Receptor M4	AAA51571.1	220	DKDTSNESSSGSATQNTKER	Homo sapiens
1146	3226	Muscarinic acetylcholine Receptor M4	AAA51571.1	221	RPAANVARKFASIARNQVRK	Homo sapiens

1147	3227	Muscarinic Acetylcholine Receptor M5	P08912	1334	KAEKRKPAHRALFRSC	Homo sapiens
1148	3227	Muscarinic Acetylcholine Receptor M5	P08912	1335	CSSYPSSEDEDKPATD	Homo sapiens
1149	3227	Muscarinic Acetylcholine Receptor M5	P08912	1336	KESPGEEFSAEETEETFV	Homo sapiens
1150	3227	Muscarinic Acetylcholine Receptor M5	P08912	1337	KFRLVVKADGNQETNNGC	Homo sapiens
1151	3227	Muscarinic Acetylcholine Receptor M5	P08912	1338	KEPSTKGLNPNPSHQM	Homo sapiens
1152	3378	Tachykinin Receptor 3	NP_001050.1	1757	PAAETWIDGGGGVGAD	Homo sapiens
1153	3378	Tachykinin Receptor 3	NP_001050.1	1759	PSQPWANLTNQFVQPSWR	Homo sapiens
1154	3378	Tachykinin Receptor 3	NP_001050.1	1760	SRKKRATPRDPSFNGC	Homo sapiens
1155	3378	Tachykinin Receptor 3	NP_001050.1	2265	ADAVNLTASLAAGAA	Homo sapiens
1156	3378	Tachykinin Receptor 3	NP_001050.1	2290	SPSALGLPVASPAPSQP	Homo sapiens
1157	3380	Neuromedin B Receptor	P28336	824	ERDFLPASDGTTTELVIRC	Homo sapiens
1158	3380	Neuromedin B Receptor	P28336	825	KTLIKSAHNLPGEYNE	Homo sapiens
1159	3380	Neuromedin B Receptor	P28336	826	SEVARISSLDNSSFTAC	Homo sapiens
1160	3380	Neuromedin B Receptor	P28336	828	CGRKSYQERGTSYLLSSSA	Homo sapiens
1161	3404	Neuropeptide Y Receptor Type 2	P49146	1057	RGELVPDPEPELIDST	Homo sapiens
1162	3404	Neuropeptide Y Receptor Type 2	P49146	1058	CIVYHLESKISKRISF	Homo sapiens
1163	3404	Neuropeptide Y Receptor Type 2	P49146	1059	REYSLIEIIPDFEIVAC	Homo sapiens
1164	3404	Neuropeptide Y Receptor Type 2	P49146	1060	NDHYHQRRQKTTKMLVC	Homo sapiens
1165	3404	Neuropeptide Y Receptor Type 2	P49146	1061	CEQRLDAIHSEVSVTFKAKK	Homo sapiens
1166	3404	Neuropeptide Y Receptor Type 2	P49146	2297	MGPIGAEADENQTVEEMKVE	Homo sapiens
1167	3404	Neuropeptide Y Receptor Type 2	P49146	2298	SEVSVTFKAKKNLEVRKNSG	Homo sapiens
1168	3405	Neuropeptide Y Receptor Type 4	P50391	1068	CVTVRQKEKANVTNLL	Homo sapiens
1169	3405	Neuropeptide Y Receptor Type 4	P50391	1069	KNHSKALEFLADKVVC	Homo sapiens
1170	3405	Neuropeptide Y Receptor	P50391	1070	CYARIYRRLQRQGRVFHKG	Homo sapiens

		Type 4				
1171	3405	Neuropeptide Y Receptor Type 4	P50391	1071	CQQSAPLEESEHLPLST	Homo sapiens
1172	3405	Neuropeptide Y Receptor Type 4	P50391	2275	SEHCQDSVDVMVFIVTS	Homo sapiens
1173	3406	Neuropeptide Y Receptor Type 5	Q15761	1072	MKKRNQKTTVNFLIGN	Homo sapiens
1174	3406	Neuropeptide Y Receptor Type 5	Q15761	1073	CGLSNKENRLEENEMI	Homo sapiens
1175	3406	Neuropeptide Y Receptor Type 5	Q15761	1074	NLTLHPSKKSGPQVKL	Homo sapiens
1176	3406	Neuropeptide Y Receptor Type 5	Q15761	1075	SFIKKHRRRYSKKTAC	Homo sapiens
1177	3406	Neuropeptide Y Receptor Type 5	Q15761	1076	PERPSQENHSRILPEN	Homo sapiens
1178	3406	Neuropeptide Y Receptor Type 5	Q15761	1077	CFEIKPEENSDVHELRV	Homo sapiens
1179	3408	Neurotensin Receptor Type 1	P30989	935	RVLAAPSSELDVNTDIYS	Homo sapiens
1180	3408	Neurotensin Receptor Type 1	P30989	936	CHPFKAKTLMSRSRTKK	Homo sapiens
1181	3408	Neurotensin Receptor Type 1	P30989	937	GEQNRSADGQHAGGLVC	Homo sapiens
1182	3408	Neurotensin Receptor Type 1	P30989	938	RQAAEQGQVCTVGGEHS	Homo sapiens
1183	3408	Neurotensin Receptor Type 1	P30989	939	CPVWRRRRKRPAFSRKADS	Homo sapiens
1184	3452	Opiate Receptor-Like 1 (OPRL1)	P41146	940	CHPIRALDVRTSSKAQA	Homo sapiens
1185	3452	Opiate Receptor-Like 1 (OPRL1)	P41146	941	PVAIMGSAQVEDEEIEC	Homo sapiens
1186	3452	Opiate Receptor-Like 1 (OPRL1)	P41146	942	GVQPSSETAVAILRFC	Homo sapiens
1187	3452	Opiate Receptor-Like 1 (OPRL1)	P41146	943	CASALRRDVQVSDRVRSIAK	Homo sapiens
1188	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NP_000264.1	2123	TPEPRPRTQPMASPRLGTFC	Homo sapiens
1189	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NP_000264.1	2124	TAVASLLKGRQGIYTE	Homo sapiens

1190	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NP_000264.1	2125	EMQTDINGGSLKPVRTAAK	Homo sapiens
1191	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NP_000264.1	2126	CSLGFQSPRKEIQWES	Homo sapiens
1192	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NP_000264.1	2127	SEGSDASTIEIHTASESC	Homo sapiens
1193	3513	Ocular Albinism 1 (Nettleship-Falls) (OA1)	NP_000264.1	2128	NPASGKVSQVGGQTSD	Homo sapiens
1194	3544	UDP-glucose Receptor (KIAA0001)	NP_055694.1	1486	CKKLHIPLKAQNDLDISRIK	Homo sapiens
1195	3544	UDP-glucose Receptor (KIAA0001)	NP_055694.1	1500	KIVKPLWTSFIQSVSYSKLL	Homo sapiens
1196	3544	UDP-glucose Receptor (KIAA0001)	NP_055694.1	1502	TAITKKIFKSHLKSSRNSTS	Homo sapiens
1197	3544	UDP-glucose Receptor (KIAA0001)	NP_055694.1	1503	VKKKSSRNIFSIVFVFFVC	Homo sapiens
1198	3582	Oxytocin Receptor	CAA46097.1	244	AEGNRTAGPPRRNEALARVE	Homo sapiens
1199	3582	Oxytocin Receptor	CAA46097.1	245	RLAVLATWLGCLVASAP	Homo sapiens
1200	3582	Oxytocin Receptor	CAA46097.1	246	PEGAAAGDGGRVALAR	Homo sapiens
1201	3582	Oxytocin Receptor	CAA46097.1	247	YLKGRRLGETSASKKSNSSS	Homo sapiens
1202	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	AAC04923.1	854	MQRIGDVLGSSEDFRR	Homo sapiens
1203	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	AAC04923.1	855	ARGGRVTCHDTSAPEL	Homo sapiens
1204	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	AAC04923.1	856	KPAYGTSGGLPRAKRK	Homo sapiens
1205	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	AAC04923.1	857	TGPSPATPARRRLGLRRSD	Homo sapiens
1206	3595	Purinergic Receptor P2Y1	CAA07339.1	386	RYSGVVYPLKSLGRLKKKN	Homo sapiens
1207	3595	Purinergic Receptor P2Y1	CAA07339.1	387	SGTGVRKNKTITCYD	Homo sapiens
1208	3595	Purinergic Receptor P2Y1	CAA07339.1	388	RALIYKDLDNSPLRRKS	Homo sapiens
1209	3595	Purinergic Receptor P2Y1	CAA07339.1	389	DTFRRRLSRATRKASRRSE	Homo sapiens
1210	3596	Purinergic Receptor P2Y5	P43657	850	FVQSTHSQGNNASEAC	Homo sapiens
1211	3596	Purinergic Receptor P2Y5	P43657	851	MVLKTLTKPVTLSRSKI	Homo sapiens
1212	3596	Purinergic Receptor P2Y5	P43657	852	TIQNSIKMKNWSVRRSD	Homo sapiens
1213	3596	Purinergic Receptor P2Y5	P43657	853	SEVHGAENFIQHNLQTLK	Homo sapiens
1214	3597	Purinergic Receptor P2Y6	Q15077	874	CTSRRALTRTAVYTLN	Homo sapiens
1215	3597	Purinergic Receptor P2Y6	Q15077	875	AQERRGKAARMAVVV	Homo sapiens

1216	3597	Purinergic Receptor P2Y6	Q15077	876	TKTAYLAVRSTPGVPC	Homo sapiens
1217	3597	Purinergic Receptor P2Y6	Q15077	877	KKFRRRPHELLQKLTAK	Homo sapiens
1218	3597	Purinergic Receptor P2Y6	Q15077	2726	CHPLAPWHKRGGRRAAW	Homo sapiens
1219	3599	G Protein-Coupled Receptor 23 (GPR23)	Q99677	870	CFRMKMRSETAIFITN	Homo sapiens
1220	3599	G Protein-Coupled Receptor 23 (GPR23)	Q99677	871	RTLRKPATLSQIGTNKK	Homo sapiens
1221	3599	G Protein-Coupled Receptor 23 (GPR23)	Q99677	872	ESFQKSFYINAHIRMES	Homo sapiens
1222	3599	G Protein-Coupled Receptor 23 (GPR23)	Q99677	873	KTETPLTTKPSLPAIQEE	Homo sapiens
1223	3599	G Protein-Coupled Receptor 23 (GPR23)	Q99677	1895	SSLRPRLGNATANNTCIVD	Homo sapiens
1224	3638	Parathyroid Hormone Receptor 2 (PTHR2)	AAC50157.1	248	KAKVQCELNITAQLQEGE	Homo sapiens
1225	3638	Parathyroid Hormone Receptor 2 (PTHR2)	AAC50157.1	249	ESLIMQDDPQNSIEATSVDK	Homo sapiens
1226	3638	Parathyroid Hormone Receptor 2 (PTHR2)	AAC50157.1	250	NSEQDCLPHSFHEETKE	Homo sapiens
1227	3638	Parathyroid Hormone Receptor 2 (PTHR2)	AAC50157.1	251	EETKEDSGRQGDDILMEKPS	Homo sapiens
1228	3640	Parathyroid Hormone Receptor 1 (PTHR1)	Q03431	761	CEKRLKEVLQRPASIMESDK	Homo sapiens
1229	3640	Parathyroid Hormone Receptor 1 (PTHR1)	Q03431	762	ESEEDKEAPTGSRYRGRPC	Homo sapiens
1230	3640	Parathyroid Hormone Receptor 1 (PTHR1)	Q03431	763	LYSGATLDEAERLTEEELR	Homo sapiens
1231	3640	Parathyroid Hormone Receptor 1 (PTHR1)	Q03431	765	KDDGFLNGSCSGLDEEASG	Homo sapiens
1232	3732	PACAP Receptor Type 1	P41586	944	CLEKIQRANELMGFNDSS	Homo sapiens
1233	3732	PACAP Receptor Type 1	P41586	945	CPELFRIFNPDQVWETET	Homo sapiens
1234	3732	PACAP Receptor Type 1	P41586	946	DSNSLDLSDMGVVSRNC	Homo sapiens
1235	3732	PACAP Receptor Type 1	P41586	948	IKRKWRSWKVNRYFAVD	Homo sapiens
1236	3732	PACAP Receptor Type 1	P41586	2292	ESDFGDSNSLDLSDMGVVSR	Homo sapiens
1237	3844	Apelin Receptor	AAA18954.1	62	RTTGDLENTTKVQC	Homo sapiens
1238	3844	Apelin Receptor	AAA18954.1	63	RSSREKRRSADIFIAS	Homo sapiens
1239	3844	Apelin Receptor	AAA18954.1	64	QTIAGHFRKERIEGLRKRRR	Homo sapiens
1240	3844	Apelin Receptor	AAA18954.1	65	GPNMGKGGEQMHEKSIPYSQ	Homo sapiens

1241	3845	Chemokine-Like Receptor 1 (CMKLR1)	LR39	447	RMEDEDYNTSISYGDEYPD	Homo sapiens
1242	3845	Chemokine-Like Receptor 1 (CMKLR1)	Q99788	448	DSIVVLEDLSPLEARVTR	Homo sapiens
1243	3845	Chemokine-Like Receptor 1 (CMKLR1)	Q99788	449	LTIVCKLHRNRLAKTKKPFK	Homo sapiens
1244	3845	Chemokine-Like Receptor 1 (CMKLR1)	Q99788	450	RSFTKMSSMNERTSMNERE	Homo sapiens
1245	3846	Sphingolipid Receptor Edg1	AAA52336.1	1010	TRSRRLTFRKNISKASRSSE	Homo sapiens
1246	3846	Sphingolipid Receptor Edg1	AAA52336.1	1011	CPSGDSAGKFKRPIIAG	Homo sapiens
1247	3846	Sphingolipid Receptor Edg1	AAA52336.1	1012	CPSGDSAGKFKRPIIAGME	Homo sapiens
1248	3846	Sphingolipid Receptor Edg1	AAA52336.1	1013	RSKSDNSSHPQKDEGD	Homo sapiens
1249	3847	Sphingolipid Receptor Edg3	Q99500	1028	ERHLTMIKMRPYDANK	Homo sapiens
1250	3847	Sphingolipid Receptor Edg3	Q99500	1029	LVKSSSRKVANHNNSE	Homo sapiens
1251	3847	Sphingolipid Receptor Edg3	Q99500	1030	SPKVKEDLPHTDPSSC	Homo sapiens
1252	3847	Sphingolipid Receptor Edg3	Q99500	1031	CLVRGRGARASPIQPALD	Homo sapiens
1253	3847	Sphingolipid Receptor Edg3	Q99500	1752	REHYQYVGKLAGRLKEASE	Homo sapiens
1254	3848	C-C Chemokine Receptor 9	P51686	958	RAHTWREKRLLYSKMVC	Homo sapiens
1255	3848	C-C Chemokine Receptor 9	P51686	959	KEESGIAICTMVYPSDEST	Homo sapiens
1256	3848	C-C Chemokine Receptor 9	P51686	960	QAKKSSKHKALKVTIT	Homo sapiens
1257	3848	C-C Chemokine Receptor 9	P51686	961	GERFRRDLVKTLKNLGC	Homo sapiens
1258	3849	G Protein-Coupled Receptor GPR1	AAA64592.1	74	ENYSYDLDYYSLESDLEEK	Homo sapiens
1259	3849	G Protein-Coupled Receptor GPR1	AAA64592.1	75	RDTVEFNNHTLCYNNFQKHD	Homo sapiens
1260	3849	G Protein-Coupled Receptor GPR1	AAA64592.1	76	SKKFQARFRSSVAEILK	Homo sapiens
1261	3849	G Protein-Coupled Receptor GPR1	AAA64592.1	77	GTVSEQLRNSETKNLC	Homo sapiens
1262	3850	G Protein-Coupled Receptor 10 (GPR10)	O75194	1087	HPLRRRISLRLSAYAV	Homo sapiens
1263	3850	G Protein-Coupled Receptor 10 (GPR10)	O75194	1088	CEEFWGSQERQRQLYA	Homo sapiens
1264	3850	G Protein-Coupled Receptor 10 (GPR10)	O75194	1089	SYVRVSVKLRNRVVPGC	Homo sapiens
1265	3850	G Protein-Coupled Receptor 10 (GPR10)	O75194	1090	CVTQSQADWDRARRRR	Homo sapiens
1266	3850	G Protein-Coupled	O75194	1091	DSFREELRKLLVAWPRKIA	Homo sapiens

		Receptor 10 (GPR10)				
1267	3851	G Protein-Coupled Receptor GPR12	AAA91630.1	78	GCIPSSLAQRARSPSD	Homo sapiens
1268	3851	G Protein-Coupled Receptor GPR12	AAA91630.1	79	ENISAAVSSRVPAVEPEPE	Homo sapiens
1269	3851	G Protein-Coupled Receptor GPR12	AAA91630.1	307	STCSVVRPLTKNNAA	Homo sapiens
1270	3851	G Protein-Coupled Receptor GPR12	AAA91630.1	308	QSEATKLVTIGLIVAS	Homo sapiens
1271	3852	CX3C Chemokine Fractalkine Receptor 1	AAA91783.1	84	KQKENECLGDYPEVLQE	Homo sapiens
1272	3852	CX3C Chemokine Fractalkine Receptor 1	AAA91783.1	85	SMNNRTVQHGVTISL	Homo sapiens
1273	3852	CX3C Chemokine Fractalkine Receptor 1	AAA91783.1	86	ETLKLYDFFPSCDMRKDLR	Homo sapiens
1274	3852	CX3C Chemokine Fractalkine Receptor 1	AAA91783.1	87	GRSVHVDFSSSESQRSRHGS	Homo sapiens
1275	3853	G Protein-Coupled Receptor GPR15	NP_005281.1	1511	CLKNYDFGSSTETSDSHLTK	Homo sapiens
1276	3853	G Protein-Coupled Receptor GPR15	NP_005281.1	1512	KALSTFIHAEDFARRRKRS	Homo sapiens
1277	3853	G Protein-Coupled Receptor GPR15	NP_005281.1	1612	ATSPNSDIRETHSHVP	Homo sapiens
1278	3853	G Protein-Coupled Receptor GPR15	NP_005281.1	1613	LMGALHFKPGSRRLID	Homo sapiens
1279	3853	G Protein-Coupled Receptor GPR15	NP_005281.1	1615	GLPTLLSRELTLIDDKPYC	Homo sapiens
1280	3854	G Protein-Coupled Receptor GPR18	AAB65819.1	93	DRYMAIVQPKYAKELKNTC	Homo sapiens
1281	3854	G Protein-Coupled Receptor GPR18	AAB65819.1	94	KDPDKDSTPATCLKISD	Homo sapiens
1282	3854	G Protein-Coupled Receptor GPR18	AAB65819.1	95	GRTSKLKPKVKEKSIR	Homo sapiens
1283	3854	G Protein-Coupled Receptor GPR18	AAB65819.1	96	RNYLRSLRRKSFRSGSLR	Homo sapiens
1284	3855	G Protein-Coupled Receptor GPR19	AAB00316.1	97	KVSREKAKKMIAASWIFD	Homo sapiens
1285	3855	G Protein-Coupled Receptor GPR19	AAB00316.1	98	DGRTVRRTMNIVPRTKVK	Homo sapiens

1286	3855	G Protein-Coupled Receptor GPR19	AAB00316.1	99	RRGMKETFCMSSMKC	Homo sapiens
1287	3855	G Protein-Coupled Receptor GPR19	AAB00316.1	100	KTITKDSIYDSFDREAKEKK	Homo sapiens
1288	3856	G Protein-Coupled Receptor GPR2/CCR10	P46092	1152	ALLFSQDGQREGQRRC	Homo sapiens
1289	3856	G Protein-Coupled Receptor GPR2/CCR10	P46092	1153	SGDEEDAYSAEPLPELC	Homo sapiens
1290	3856	G Protein-Coupled Receptor GPR2/CCR10	P46092	1154	ALLLDTADLLAARERSC	Homo sapiens
1291	3856	G Protein-Coupled Receptor GPR2/CCR10	P46092	1155	RRLLRGGSSPSGPQPRRGC	Homo sapiens
1292	3857	G Protein-Coupled Receptor GPR20	AAC51302.1	101	KGSGRHHILSAGPHALTQ	Homo sapiens
1293	3857	G Protein-Coupled Receptor GPR20	AAC51302.1	102	RTNASGLEVPLFHLFARLDE	Homo sapiens
1294	3857	G Protein-Coupled Receptor GPR20	AAC51302.1	103	SRPGLLHQGRQRRVRAMQ	Homo sapiens
1295	3857	G Protein-Coupled Receptor GPR20	AAC51302.1	104	GQHGEREPSSGDVVSMHRSS	Homo sapiens
1296	3858	G Protein-Coupled Receptor GPR21	AAC51303.1	105	SERQARFSSQSGETGEVQAC	Homo sapiens
1297	3858	G Protein-Coupled Receptor GPR21	AAC51303.1	106	DPYTVRSKGPLNGC	Homo sapiens
1298	3858	G Protein-Coupled Receptor GPR21	AAC51303.1	107	NSTLDGNQSSHPFCLL	Homo sapiens
1299	3858	G Protein-Coupled Receptor GPR21	AAC51303.1	108	CASQTTANDPYTVRSK	Homo sapiens
1300	3859	G Protein-Coupled Receptor GPR22	AAC51304.1	109	EINMQSESNITVRDDIDD	Homo sapiens
1301	3859	G Protein-Coupled Receptor GPR22	AAC51304.1	111	RRAVKRHRERRERQKRVFRM	Homo sapiens
1302	3859	G Protein-Coupled Receptor GPR22	AAC51304.1	112	TRQKFQKVLKSKMKKR	Homo sapiens
1303	3859	G Protein-Coupled Receptor GPR22	AAC51304.1	113	DPKRNKKITFEDSEIREKR	Homo sapiens
1304	3860	G Protein-Coupled Receptor SLC/MCH1	AAH01736.1	1532	CAPGQGGRRWRLPQPAWVEG	Homo sapiens
1305	3860	G Protein-Coupled	AAH01736.1	1533	EASLLPTGPNASNTSDGPDN	Homo sapiens

		Receptor SLC/MCH1				
1306	3860	G Protein-Coupled Receptor SLC/MCH1	AAH01736.1	1539	KGVGRAVGLGGGSGCQATE	Homo sapiens
1307	3860	G Protein-Coupled Receptor SLC/MCH1	AAH01736.1	1565	RMTSSVAPASQRSIRLRTKR	Homo sapiens
1308	3860	G Protein-Coupled Receptor SLC/MCH1	AAH01736.1	1567	RAVSNAQTADEERTESKG	Homo sapiens
1309	3861	G Protein-Coupled Receptor GPR25	O00155	376	RGLQPLPGGQDSQCGEEP	Homo sapiens
1310	3861	G Protein-Coupled Receptor GPR25	O00155	377	CRISRRLRRPPHVGRARRNS	Homo sapiens
1311	3861	G Protein-Coupled Receptor GPR25	O00155	378	RTGRLARRISSASSLSRDD	Homo sapiens
1312	3861	G Protein-Coupled Receptor GPR25	O00155	483	DYSGLDGLEELELCPAGD	Homo sapiens
1313	3862	G Protein-Coupled Receptor GPR3	AAB60402.1	118	TVYCLLGDAHSPPLYT	Homo sapiens
1314	3862	G Protein-Coupled Receptor GPR3	AAB60402.1	119	EGPTGPAAPLPSPKAWD	Homo sapiens
1315	3862	G Protein-Coupled Receptor GPR3	AAB60402.1	120	HFAAVFCIGSAEMSL	Homo sapiens
1316	3862	G Protein-Coupled Receptor GPR3	AAB60402.1	121	GLTTCGVVYPLSKNH	Homo sapiens
1317	3863	G Protein-Coupled Receptor GPR31	O00270	1157	REPEKQPKLQRAQALVTLV	Homo sapiens
1318	3863	G Protein-Coupled Receptor GPR31	O00270	1158	CHSFYSRADGSFSIIWQEA	Homo sapiens
1319	3863	G Protein-Coupled Receptor GPR31	O00270	1159	QNLGSCRALCAVAHTSDVTG	Homo sapiens
1320	3863	G Protein-Coupled Receptor GPR31	O00270	1160	SPTFRSSYRRVFHTLRGKGQ	Homo sapiens
1321	3864	G Protein-Coupled Receptor GPR4	AAA98457.1	143	DELFRDRYNHTFCFEKFPME	Homo sapiens
1322	3864	G Protein-Coupled Receptor GPR4	AAA98457.1	144	LRAVRGSVSTERQEKAKIKR	Homo sapiens
1323	3864	G Protein-Coupled Receptor GPR4	AAA98457.1	145	RSDVAKALHNLLRFLASDK	Homo sapiens
1324	3864	G Protein-Coupled Receptor GPR4	AAA98457.1	146	NASLTLETPLTSKRNSTAK	Homo sapiens

1325	3866	G Protein-Coupled Receptor GPR6	AAA91631.1	166	FQYLVPSETVSLLTVG	Homo sapiens
1326	3866	G Protein-Coupled Receptor GPR6	AAA91631.1	167	CLAERAACSVVRPLARSH	Homo sapiens
1327	3866	G Protein-Coupled Receptor GPR6	AAA91631.1	168	HLYVRICQVVWRHAH	Homo sapiens
1328	3866	G Protein-Coupled Receptor GPR6	AAA91631.1	169	EIQRALWLLLCGCFQSK	Homo sapiens
1329	3867	G Protein-Coupled Receptor GPR7	AAC50197.1	171	ATAESRRVAGRTYSAAR	Homo sapiens
1330	3867	G Protein-Coupled Receptor GPR7	AAC50197.1	172	RLDDEQGRRQCVLVFPQPE	Homo sapiens
1331	3867	G Protein-Coupled Receptor GPR7	AAC50197.1	173	RLHAMRLDSHAKALERAKKR	Homo sapiens
1332	3867	G Protein-Coupled Receptor GPR7	AAC50197.1	174	DASFRRNLRQLITC	Homo sapiens
1333	3868	G Protein-Coupled Receptor GPR8	AAC50198.1	175	NVSQDNGTGHNATFSEP	Homo sapiens
1334	3868	G Protein-Coupled Receptor GPR8	AAC50198.1	176	RSRHMPWRTYRGAKVAS	Homo sapiens
1335	3868	G Protein-Coupled Receptor GPR8	AAC50198.1	177	VRLRSGAKALGKARRK	Homo sapiens
1336	3868	G Protein-Coupled Receptor GPR8	AAC50198.1	178	LDDNFRKNFRSILRC	Homo sapiens
1337	3869	G Protein-Coupled Receptor HM74	BAA01721.1	179	QDHFLEIDKKNCCVFRDD	Homo sapiens
1338	3869	G Protein-Coupled Receptor HM74	BAA01721.1	180	ARIIWSLRQRQMDRHAKIKR	Homo sapiens
1339	3869	G Protein-Coupled Receptor HM74	BAA01721.1	181	CLQRKMTGEPDNNRSTSVE	Homo sapiens
1340	3869	G Protein-Coupled Receptor HM74	BAA01721.1	182	DPNKTRGAPEALMANSGE	Homo sapiens
1341	3869	G Protein-Coupled Receptor HM74	BAA01721.1	183	SNNHSKKGHCHQEPASLEKQ	Homo sapiens
1342	3869	G Protein-Coupled Receptor HM74	BAA01721.1	1453	RQRQMDRHAKIKRAITFIMV	Homo sapiens
1343	3869	G Protein-Coupled Receptor HM74	BAA01721.1	1454	SPSYLGPTSNNHSKKG	Homo sapiens
1344	3870	G Protein-Coupled	Q15743	1192	AVRRSHGTQKSRKDQI	Homo sapiens

		Receptor OGR1				
1345	3870	G Protein-Coupled Receptor OGR1	Q15743	1193	LMHEEVIEDENQHRVC	Homo sapiens
1346	3870	G Protein-Coupled Receptor OGR1	Q15743	1194	CFVSETTHRDLARLRG	Homo sapiens
1347	3870	G Protein-Coupled Receptor OGR1	Q15743	1195	CSRTGRAREAYPLGAPEASG	Homo sapiens
1348	3921	Prostacyclin Receptor	P43119	1188	CRMYRQQKRHQGSLGPRPRT	Homo sapiens
1349	3921	Prostacyclin Receptor	P43119	1189	CFTQAVAPDSSSEMGD	Homo sapiens
1350	3921	Prostacyclin Receptor	P43119	1190	ASGRRDPRAPSAPVGKEGSC	Homo sapiens
1351	3921	Prostacyclin Receptor	P43119	1191	SAWGEGQVEPLPPTQQ	Homo sapiens
1352	3923	Prostaglandin D2 Receptor	Q13258	458	KSPFYRCQNTTSVEKGNSAV	Homo sapiens
1353	3923	Prostaglandin D2 Receptor	Q13258	459	RNLYAMHRRLQRHPRSC	Homo sapiens
1354	3923	Prostaglandin D2 Receptor	Q13258	503	CAEPRADGREASPQPLEEL	Homo sapiens
1355	3923	Prostaglandin D2 Receptor	Q13258	504	KDVKEKNRTSEEAEDLRALR	Homo sapiens
1356	3924	Prostaglandin E Receptor EP1	P34995	962	AQAAGRLRRRRSATTF	Homo sapiens
1357	3924	Prostaglandin E Receptor EP1	P34995	963	CVGVTRPLLHAARVSVARAR	Homo sapiens
1358	3924	Prostaglandin E Receptor EP1	P34995	964	CNTLSGLALHRARWRR	Homo sapiens
1359	3924	Prostaglandin E Receptor EP1	P34995	965	ASGPDSRRRWGAHGPR	Homo sapiens
1360	3924	Prostaglandin E Receptor EP1	P34995	966	SGSARRARAHDVEMVGQ	Homo sapiens
1361	3925	Prostaglandin E Receptor EP2	AAD44177.1	967	IALALLARRWRGDVGC	Homo sapiens
1362	3925	Prostaglandin E Receptor EP2	AAD44177.1	968	CETRQWLPPGESPAISSV	Homo sapiens
1363	3925	Prostaglandin E Receptor EP2	AAD44177.1	969	GPSLGSGRGGPGARRRGE	Homo sapiens
1364	3925	Prostaglandin E Receptor EP2	AAD44177.1	971	NETSSRKEKWDLQALR	Homo sapiens
1365	3926	Prostaglandin E2 Receptor EP3	CAB52459.1	972	ERSAEARGNLTRPPGSGEDC	Homo sapiens
1366	3926	Prostaglandin E2 Receptor EP3	CAB52459.1	973	SRSYRRRESKRKKSFLLC	Homo sapiens
1367	3926	Prostaglandin E2 Receptor	CAB52459.1	974	CRAKATASQSSAQWGR	Homo sapiens

		EP3				
1368	3926	Prostaglandin E2 Receptor EP3	CAB52459.1	975	KFCQVANAVSSCSNDGQ	Homo sapiens
1369	3927	Prostaglandin E Receptor EP4	P35408	382	RLSDFRRRRSFRRIAGAE	Homo sapiens
1370	3927	Prostaglandin E Receptor EP4	P35408	383	EREVSKNPDLQAIRIAS	Homo sapiens
1371	3927	Prostaglandin E Receptor EP4	P35408	384	DSQRTSSAMSGHSRSFISRE	Homo sapiens
1372	3927	Prostaglandin E Receptor EP4	P35408	385	RTLRISETSDSSQGQDSE	Homo sapiens
1373	3928	Prostaglandin F2-alpha Receptor	P43088	1046	ILMKAYQRFRQKSKAS	Homo sapiens
1374	3928	Prostaglandin F2-alpha Receptor	P43088	1047	ASDKEWIRFDQSNVLC	Homo sapiens
1375	3928	Prostaglandin F2-alpha Receptor	P43088	1048	TKPIFHSTKITSKHVK	Homo sapiens
1376	3928	Prostaglandin F2-alpha Receptor	P43088	1049	CFYNTEDIKDWEDRFY	Homo sapiens
1377	3928	Prostaglandin F2-alpha Receptor	P43088	1050	RVKFKSQQHRQGRSHHLE	Homo sapiens
1378	4051	Proteinase-Activated Receptor 2	AAB47871.1	252	QGTNRSSKGRSLIGKVDGTS	Homo sapiens
1379	4051	Proteinase-Activated Receptor 2	AAB47871.1	253	QRYWVIVNPMGHSRKKAN	Homo sapiens
1380	4051	Proteinase-Activated Receptor 2	AAB47871.1	255	SHDFRDHAKNALLCRSVR	Homo sapiens
1381	4051	Proteinase-Activated Receptor 2	AAB47871.1	256	VSLTSKKHSRKSSSYS	Homo sapiens
1382	4052	Proteinase-Activated Receptor 3	AAC51218.1	257	ENDTNNLAKPTLPIKTFR	Homo sapiens
1383	4052	Proteinase-Activated Receptor 3	AAC51218.1	258	CPEESASHLHVKNATMG	Homo sapiens
1384	4052	Proteinase-Activated Receptor 3	AAC51218.1	260	QPDITTCHDVHNTCESSSP	Homo sapiens
1385	4052	Proteinase-Activated Receptor 3	AAC51218.1	261	MSKTRNHSTAYLTK	Homo sapiens
1386	4090	G Protein-Coupled Receptor GPR17	CAB08108.1	88	RDHKSGTPANVFLMH	Homo sapiens

1387	4090	G Protein-Coupled Receptor GPR17	CAB08108.1	90	RSLRQGLRVEKRLKTKAVR	Homo sapiens
1388	4090	G Protein-Coupled Receptor GPR17	CAB08108.1	91	RSHGASCATQRILALANR	Homo sapiens
1389	4090	G Protein-Coupled Receptor GPR17	CAB08108.1	92	FEGKTNESSLSAKSE	Homo sapiens
1390	4254	Rhodopsin	P08100	1051	RNCMLTTICCGKNPLGD	Homo sapiens
1391	4254	Rhodopsin	P08100	1052	CGIDYYTLKPEVNNESFVI	Homo sapiens
1392	4254	Rhodopsin	P08100	1053	CWVPYASVAFYIFTHQGSN	Homo sapiens
1393	4254	Rhodopsin	P08100	1055	VLGGFTSTLYTSLHGY	Homo sapiens
1394	4284	Retinal G Protein-Coupled Receptor RPE	P47804	1042	ATSSLLRRWPYGSDGC	Homo sapiens
1395	4284	Retinal G Protein-Coupled Receptor RPE	P47804	1043	CTLDYSKGDRNFTSFL	Homo sapiens
1396	4284	Retinal G Protein-Coupled Receptor RPE	P47804	1044	MEQKLGKSGHLQVNTT	Homo sapiens
1397	4284	Retinal G Protein-Coupled Receptor RPE	P47804	1045	MVCRGIWQCLSPQKRE	Homo sapiens
1398	4321	Secretin Receptor	P47872	950	CLQELSREQTGDLGTEQ	Homo sapiens
1399	4321	Secretin Receptor	P47872	951	CPRFLRMLTSRNGSLFRN	Homo sapiens
1400	4321	Secretin Receptor	P47872	952	CGVNVNDSSNEKRHSY	Homo sapiens
1401	4321	Secretin Receptor	P47872	954	KDAVLFSSDDVTYCDAH	Homo sapiens
1402	4321	Secretin Receptor	P47872	956	MRKLRTQETRGNEVSH	Homo sapiens
1403	4480	Somatostatin Receptor Type 1	P30872	994	EEPGRNASQNGTLSEG	Homo sapiens
1404	4480	Somatostatin Receptor Type 1	P30872	996	CLSWMDNAAEEPVDY	Homo sapiens
1405	4480	Somatostatin Receptor Type 1	P30872	997	EDFQPENLESGGVFRNGTC	Homo sapiens
1406	4480	Somatostatin Receptor Type 1	P30872	2616	LSVDAVNMFTSIYC	Homo sapiens
1407	4480	Somatostatin Receptor Type 1	P30872	2618	RAYSVEDFQPENLES	Homo sapiens
1408	4481	Somatostatin Receptor Type 2	P30874	998	RSNQWGRSSCTINWPGE	Homo sapiens
1409	4481	Somatostatin Receptor Type 2	P30874	999	KVKSSGIRVGSSKRKKSE	Homo sapiens
1410	4481	Somatostatin Receptor Type	P30874	1000	CLVKVSGTDDGERSDS	Homo sapiens

		2				
1411	4481	Somatostatin Receptor Type 2	P30874	1001	KQDKSRLNETTETQRT	Homo sapiens
1412	4481	Somatostatin Receptor Type 2	P30874	2276	DMADEPLNGSHTWLSIP	Homo sapiens
1413	4482	Somatostatin Receptor Type 3	P32745	1002	KVRSAGRRVWAPSCQR	Homo sapiens
1414	4482	Somatostatin Receptor Type 3	P32745	2622	REGGKGKEMNGRVSQI	Homo sapiens
1415	4482	Somatostatin Receptor Type 3	P32745	2624	TTSEPENASSAWPPD	Homo sapiens
1416	4482	Somatostatin Receptor Type 3	P32745	2626	QPGTSGQERPPSRVA	Homo sapiens
1417	4483	Somatostatin Receptor Type 4	P31391	1007	IFADTRPARGGQAVAC	Homo sapiens
1418	4483	Somatostatin Receptor Type 4	P31391	1008	CLLEGAGGAEEEPLDY	Homo sapiens
1419	4483	Somatostatin Receptor Type 4	P31391	2627	KMRAVALRAGWQQRR	Homo sapiens
1420	4483	Somatostatin Receptor Type 4	P31391	2631	CRAVLSVDGLNMFTSV	Homo sapiens
1421	4483	Somatostatin Receptor Type 4	P31391	2633	CLVGLVGNALVIFVIL	Homo sapiens
1422	4484	Somatostatin Receptor Type 5	NP_001044.1	2637	SLPLLVFADVQEGGTC	Homo sapiens
1423	4484	Somatostatin Receptor Type 5	NP_001044.1	2638	CLRKGSGAKDADATEP	Homo sapiens
1424	4484	Somatostatin Receptor Type 5	NP_001044.1	2639	RIRQQQEATPPAHRAAA	Homo sapiens
1425	4484	Somatostatin Receptor Type 5	NP_001044.1	2643	RVAKLASAAAWVLSLC	Homo sapiens
1426	4552	Tachykinin Receptor 1	AAA36641.1	1339	CMIEWPEHPNKIYEKV	Homo sapiens
1427	4552	Tachykinin Receptor 1	AAA36641.1	1340	CPFISAGDYEGLEMKSTRYL	Homo sapiens
1428	4552	Tachykinin Receptor 1	AAA36641.1	1341	KVSRLETTISTVVGAHEE	Homo sapiens
1429	4552	Tachykinin Receptor 1	AAA36641.1	1342	EPEDGPKATPSSLDLTSNC	Homo sapiens
1430	4687	Thrombin Receptor	P25116	1202	EDEEKNESGLTEYRLV	Homo sapiens
1431	4687	Thrombin Receptor	P25116	2582	AVANRSKKSRALFLSAAVFC	Homo sapiens
1432	4687	Thrombin Receptor	P25116	2583	SINKSSPLQKQLPAFISE	Homo sapiens

1433	4687	Thrombin Receptor	P25116	2621	DPRSFLLRNPNDKYEPFWE	Homo sapiens
1434	4734	Thyrotropin Releasing Hormone Receptor	P34981	1196	PSDPKENSKTWKNDST	Homo sapi ns
1435	4734	Thyrotropin Releasing Hormone Receptor	P34981	1197	CFNSTVSSRKQVTKMLA	Homo sapiens
1436	4734	Thyrotropin Releasing Hormone Receptor	P34981	1198	RAAFRKLCNCKQKPTE	Homo sapiens
1437	4734	Thyrotropin Releasing Hormone Receptor	P34981	1199	KPANYSVALNYSVIKE	Homo sapiens
1438	4734	Thyrotropin Releasing Hormone Receptor	P34981	1200	KESDHFSTELDDITVTD	Homo sapiens
1439	4944	Angiotensin II Type 1 Receptor	NP_000676.1	1771	EIQKNKPRNDDIFKII	Homo sapiens
1440	4944	Angiotensin II Type 1 Receptor	NP_000676.1	1772	SYRPSDNVSSSTKKPAPC	Homo sapiens
1441	4944	Angiotensin II Type 1 Receptor	NP_000676.1	1773	LNSSTEDGIKRIQDDC	Homo sapiens
1442	4946	Angiotensin II Type 2 Receptor	P50052	1321	CSQKPSDKHLDAIPIL	Homo sapiens
1443	4946	Angiotensin II Type 2 Receptor	P50052	1322	DRYQSVIYPFLSQRRN	Homo sapiens
1444	4946	Angiotensin II Type 2 Receptor	P50052	1323	RKHLLKTNSYGKNRITRD	Homo sapiens
1445	4946	Angiotensin II Type 2 Receptor	P50052	1324	RVPITWLQGKRESMSC	Homo sapiens
1446	5072	Pyrimidinergic Receptor P2Y4	P51582	1142	CHDTTRPEEFDHYVHFSSA	Homo sapiens
1447	5072	Pyrimidinergic Receptor P2Y4	P51582	1145	YLLTGDKYRRQLRQLC	Homo sapiens
1448	5072	Pyrimidinergic Receptor P2Y4	P51582	2696	HPLRALRWGRPRLAG	Homo sapiens
1449	5072	Pyrimidinergic Receptor P2Y4	P51582	2697	HITRTIYYLARLLEADC	Homo sapiens
1450	5117	Vasopressin V1A Receptor	AAA62271.1	262	REAEALGEGNGPPRDVRNEE	Homo sapiens
1451	5117	Vasopressin V1A Receptor	AAA62271.1	263	NVRGKTASRQSKGAEQ	Homo sapiens
1452	5117	Vasopressin V1A Receptor	AAA62271.1	264	QNMKEKFNKEDTDSMSRRQ	Homo sapiens
1453	5117	Vasopressin V1A Receptor	AAA62271.1	265	RQTFYSNNRSPTNSTGMWKD	Homo sapiens
1454	5118	Vasopressin V1B Receptor	AAA65687.1	266	NATTPWLGRDEELAKVE	Homo sapiens
1455	5118	Vasopressin V1B Receptor	AAA65687.1	267	TRGLPSRVSSINTISRAKIR	Homo sapiens

1456	5118	Vasopressin V1B Receptor	AAA65687.1	268	QPRMRRRLSDGSLSSRH	Homo sapiens
1457	5118	Vasopressin V1B Receptor	AAA65687.1	269	ESPRDLELADGEGTAET	Homo sapiens
1458	5119	Vasopressin V2 Receptor	CAA77746.1	270	SNSSQERPLDTRDPLLARAE	Homo sapiens
1459	5119	Vasopressin V2 Receptor	CAA77746.1	271	RHGSGAHWNRPVLVAWAFS	Homo sapiens
1460	5119	Vasopressin V2 Receptor	CAA77746.1	272	CQVLIFREIHASLVPGPSER	Homo sapiens
1461	5119	Vasopressin V2 Receptor	CAA77746.1	273	RGRTPPSLGPQDESC	Homo sapiens
1462	5133	Peropsin	O14718	1147	KNEDGSVFSQTEHNIV	Homo sapiens
1463	5133	Peropsin	O14718	1148	IKYKELRTPTNAIIIN	Homo sapiens
1464	5133	Peropsin	O14718	1149	RKNDRSFVSYTMTVIA	Homo sapiens
1465	5133	Peropsin	O14718	1150	CTESLNRDWSDQIDVTK	Homo sapiens
1466	5133	Peropsin	O14718	1151	VANKKFRRAMLAMFKC	Homo sapiens
1467	5519	Brain-Specific Angiogenesis Inhibitor 1	O14514	987	CGPAGRTSSRSQSLRSTDAR	Homo sapiens
1468	5519	Brain-Specific Angiogenesis Inhibitor 1	O14514	988	EENRDKWEEAQLAGPN	Homo sapiens
1469	5519	Brain-Specific Angiogenesis Inhibitor 1	O14514	989	CRVVDRQEEGNGDSGG	Homo sapiens
1470	5519	Brain-Specific Angiogenesis Inhibitor 1	O14514	990	KRDKAPKSSFVGDGDI	Homo sapiens
1471	5519	Brain-Specific Angiogenesis Inhibitor 1	O14514	991	RKLQHAAEKDKEVLGP	Homo sapiens
1472	5520	Brain-Specific Angiogenesis Inhibitor 2	O60241	981	CLRPSPEEAVAQAESEVGR	Homo sapiens
1473	5520	Brain-Specific Angiogenesis Inhibitor 2	O60241	982	GSSNDLFTTEMRYGEE	Homo sapiens
1474	5520	Brain-Specific Angiogenesis Inhibitor 2	O60241	983	MARDGISDKSKKQRAGSERC	Homo sapiens
1475	5520	Brain-Specific Angiogenesis Inhibitor 2	O60241	984	EDAPRARPEGTPRRAAK	Homo sapiens
1476	5520	Brain-Specific Angiogenesis Inhibitor 2	O60241	985	RSRTMPRTVPGSTMKMGSLE	Homo sapiens
1477	5520	Brain-Specific Angiogenesis Inhibitor 2	O60241	986	KREKRWSVSSGGAAERSVC	Homo sapiens
1478	5521	Brain-Specific Angiogenesis Inhibitor 3	O60242	976	RRVFPTNFPGLQKKGE	Homo sapiens
1479	5521	Brain-Specific Angiogenesis Inhibitor 3	O60242	977	CNLTREAKRPPKEEFG	Homo sapiens
1480	5521	Brain-Specific Angiogenesis	O60242	978	KLKHRAGQMSEPHSGLTLKC	Homo sapiens

		Inhibitor 3				
1481	5521	Brain-Specific Angiogenesis Inhibitor 3	O60242	979	CTDDNLRGADMDIVHPQER	Homo sapiens
1482	5521	Brain-Specific Angiogenesis Inhibitor 3	O60242	980	SRSETGSTISMSSLERR	Homo sapiens
1483	6031	SIV/HIV Receptor BONZO	O00574	1101	NDSSQEEHQDFLQFSK	Homo sapiens
1484	6031	SIV/HIV Receptor BONZO	O00574	1102	KATKAYNQQAKRMTWG	Homo sapiens
1485	6031	SIV/HIV Receptor BONZO	O00574	1103	KTLLHAGGFQKHRSLK	Homo sapiens
1486	6031	SIV/HIV Receptor BONZO	O00574	1104	SLKFRKNFWKLVKDIGC	Homo sapiens
1487	6031	SIV/HIV Receptor BONZO	O00574	1105	KSSEDNSKTFSASHNV	Homo sapiens
1488	6204	Lysophosphatidic Acid Receptor Edg4	AAC27728.1	66	ERHRSVMAVQLHSRLPRGR	Homo sapiens
1489	6204	Lysophosphatidic Acid Receptor Edg4	AAC27728.1	67	RRRVQRMAEHVSCHPRYRE	Homo sapiens
1490	6204	Lysophosphatidic Acid Receptor Edg4	AAC27728.1	68	NAAVYSCRDAEMRRTFRR	Homo sapiens
1491	6204	Lysophosphatidic Acid Receptor Edg4	AAC27728.1	69	RQSTRESVHYTSSAQGGAST	Homo sapiens
1492	6213	C-C Chemokine Receptor 5	AAC50598.1	38	YSQYQFWKNFQTLK	Homo sapiens
1493	6213	C-C Chemokine Receptor 5	AAC50598.1	39	QQEAPERASSVYTRSTGEQE	Homo sapiens
1494	6213	C-C Chemokine Receptor 5	AAC50598.1	40	RSQKEGLHYTCSSHFPYSQ	Homo sapiens
1495	6213	C-C Chemokine Receptor 5	AAC50598.1	309	MDYQVSSPIYDINYYTSEPC	Homo sapiens
1496	6363	Chemokine (C-C motif) Receptor-like 2 (CCRL2)	O00421	1092	EDEYDVLIEGELESDEAEQC	Homo sapiens
1497	6363	Chemokine (C-C motif) Receptor-like 2 (CCRL2)	O00421	1093	KGNFFSARRRVPCGIITSVL	Homo sapiens
1498	6363	Chemokine (C-C motif) Receptor-like 2 (CCRL2)	O00421	1094	MRKTLRFREQRYSLFKLVFA	Homo sapiens
1499	6363	Chemokine (C-C motif) Receptor-like 2 (CCRL2)	O00421	1096	RSNTPLQPRGQSAQGTSRE	Homo sapiens
1500	6446	Pael Receptor (GPR37)	AAC51281.1	127	GPGNSARDVLRARAPREEQG	Homo sapiens
1501	6446	Pael Receptor (GPR37)	AAC51281.1	129	DPGGPRRGNSTNRRVRLKNP	Homo sapiens
1502	6446	Pael Receptor (GPR37)	AAC51281.1	130	LRQLSKEDLGFSGRAPAERC	Homo sapiens
1503	6446	Pael Receptor (GPR37)	AAC51281.1	131	PRGAVISGRSQEQSVKTVPG	Homo sapiens
1504	6446	Pael Receptor (GPR37)	AAC51281.1	1781	CIQKSSTVTSDDNDNEYTTE	Homo sapiens
1505	6446	Pael Receptor (GPR37)	NP_005293.1	1806	CIQKSSTVTSDDNDNEYTTE	Homo sapiens
1506	6536	Putative Neurotransmitter Receptor (PNR)	O14804	319	TDVVETRLSQWLEEMPC	Homo sapiens

1507	6536	Putative Neurotransmitter Receptor (PNR)	O14804	320	KSLAGAAKHERKAAKT	Homo sapiens
1508	6536	Putative Neurotransmitter Receptor (PNR)	O14804	321	RKALKLTLSQKVFSPQTR	Homo sapiens
1509	6536	Putative Neurotransmitter Receptor (PNR)	O14804	485	HPAAFCYQVNGSCPR	Homo sapiens
1510	6777	G Protein-Coupled Receptor TM7SF1	O60478	788	KAKSKYSPELLKYRLP	Homo sapiens
1511	6777	G Protein-Coupled Receptor TM7SF1	O60478	790	KTGNWERKVIVSVRVA	Homo sapiens
1512	6777	G Protein-Coupled Receptor TM7SF1	O60478	791	KSVHSFDYDWYNVSDQAD	Homo sapiens
1513	6777	G Protein-Coupled Receptor TM7SF1	O60478	792	RVRNPTKDLTNPGMVP	Homo sapiens
1514	6777	G Protein-Coupled Receptor TM7SF1	O60478	793	RYDSDDDLAWNIAPQGLQ	Homo sapiens
1515	6853	Purinergic Receptor P2Y11	O43190	865	PTLSFSHLKRPQQGAGNC	Homo sapiens
1516	6853	Purinergic Receptor P2Y11	O43190	866	GALGRAVLRSPGMTVAE	Homo sapiens
1517	6853	Purinergic Receptor P2Y11	O43190	867	MRVLNVDARRRWSTRC	Homo sapiens
1518	6853	Purinergic Receptor P2Y11	O43190	868	CPGYRDSWNPEDAKSTGQA	Homo sapiens
1519	6853	Purinergic Receptor P2Y11	O43190	2299	CPANFLAAADDKLSGFQGD	Homo sapiens
1520	6853	Purinergic Receptor P2Y11	O43190	2300	ASNGLALYRFSIRKQR	Homo sapiens
1521	6921	G Protein-Coupled Receptor GPR39	AAC26082.1	137	CNRSSTRHHEQPETSN	Homo sapiens
1522	6921	G Protein-Coupled Receptor GPR39	AAC26082.1	139	PNQIRRIMAAAKPKHD	Homo sapiens
1523	6921	G Protein-Coupled Receptor GPR39	AAC26082.1	140	EKRLRVHAHSTTDSAR	Homo sapiens
1524	6921	G Protein-Coupled Receptor GPR39	AAC26082.1	141	VQRPLLFASRRQSSARRTEK	Homo sapiens
1525	6921	G Protein-Coupled Receptor GPR39	AAC26082.1	142	QSEAEPQSKSQSLSLESLEP	Homo sapiens
1526	7221	Galanin Receptor GalR2	AAC39634.1	197	NLTVCHPAWSAPRRRAMD	Homo sapiens
1527	7221	Galanin Receptor GalR2	AAC39634.1	198	RAVDPVAAGSGARRAKRK	Homo sapiens
1528	7221	Galanin Receptor GalR2	AAC39634.1	199	GRAPGRASGRVCAAARG	Homo sapiens
1529	7221	Galanin Receptor GalR2	AAC39634.1	200	ERESSDLLHMSEAAGALRPC	Homo sapiens
1530	7246	Orexin Receptor 1	AAC39601.1	235	DQLGDLEQGLSGEPQP	Homo sapiens
1531	7246	Orexin Receptor 1	AAC39601.1	236	EPSATPGAQMGVPPGSR	Homo sapiens

1532	7246	Orexin Receptor 1	AAC39601.1	237	KRPSDQLGDLEQGLSGEPQ	Homo sapiens
1533	7246	Orexin Receptor 1	AAC39601.1	239	KAPSPRSSASHKSLSLQSRC	Homo sapiens
1534	7247	Orexin Receptor 2	AAC39602.1	240	SELNETQEPFLNPTDYDDEE	Homo sapiens
1535	7247	Orexin Receptor 2	AAC39602.1	241	KWKPLQPVSQPRGPGQ	Homo sapiens
1536	7247	Orexin Receptor 2	AAC39602.1	242	TKSRMSAVAAEIKQIRA	Homo sapiens
1537	7247	Orexin Receptor 2	AAC39602.1	243	RQEDRLTRGRTSTESRKS	Homo sapiens
1538	8436	Platelet-Activating Factor Receptor	P25105	1097	AVTRPIKTAQANTRKR	Homo sapiens
1539	8436	Platelet-Activating Factor Receptor	P25105	1098	DSTNTVPDSAGSGNVTRC	Homo sapiens
1540	8436	Platelet-Activating Factor Receptor	P25105	1099	QQRNAEVKRRALWMVC	Homo sapiens
1541	8436	Platelet-Activating Factor Receptor	P25105	1100	KKFRKHLTEKFYSMRSSRKC	Homo sapiens
1542	8509	G Protein-Coupled Receptor Ls8509	Q14439	398	DRYYSVLYPLERKISDAKSR	Homo sapiens
1543	8509	G Protein-Coupled Receptor Ls8509	Q14439	400	DEEESEAKYIGSADFQAKE	Homo sapiens
1544	8509	G Protein-Coupled Receptor Ls8509	Q14439	401	ETRNSKKRLLPPLGNTPEE	Homo sapiens
1545	8509	G Protein-Coupled Receptor Ls8509	Q14439	402	ELIQTKVPKVGRVERKMSR	Homo sapiens
1546	8896	Neuropeptide Y Receptor Type 6 Pseudogene	Q99463	1078	KKQRKAQNFTSILIAN	Homo sapiens
1547	8896	Neuropeptide Y Receptor Type 6 Pseudogene	Q99463	1079	FRNLSLPTDLYTHQVAC	Homo sapiens
1548	8896	Neuropeptide Y Receptor Type 6 Pseudogene	Q99463	1080	CVENWPSKKDRLLFTT	Homo sapiens
1549	8896	Neuropeptide Y Receptor Type 6 Pseudogene	Q99463	1081	CLRRRNAKVDKKKENEGR	Homo sapiens
1550	9421	Neuropeptide Y Receptor Type 1	P25929	1064	DEPFQNVTLDAYKDKYVC	Homo sapiens
1551	9421	Neuropeptide Y Receptor Type 1	P25929	1065	CYFKIYIRLKRRNNMMDK	Homo sapiens
1552	9421	Neuropeptide Y Receptor Type 1	P25929	1066	CDFRSRDDDYETIAMS	Homo sapiens
1553	9421	Neuropeptide Y Receptor Type 1	P25929	1498	ENDDCHLPLAMIFTLALA	Homo sapiens
1554	9421	Neuropeptide Y Receptor	P25929	2291	SNFSEKNAQLLAFENDDC	Homo sapiens

		Type 1				
1555	9834	Corticotropin releasing factor Receptor 1	NP_004373.1	1778	CESLSLASNISDNGYRE	Homo sapiens
1556	9834	Corticotropin releasing factor Receptor 1	NP_004373.1	1779	CQEILNEEKKSKVHYHVA	Homo sapiens
1557	10457	Frizzled-2	NP_001457.1	1774	NHSEDGAPALLTTAPP	Homo sapiens
1558	10457	Frizzled-2	NP_001457.1	1775	GGAPPRYATLEHPFHC	Homo sapiens
1559	10457	Frizzled-2	NP_001457.1	1776	CEPARPDGSMFFSQEE	Homo sapiens
1560	11968	Putative Leukocyte Platelet-Activating Factor Receptor (HUMNPIIY20)	AAB97766.1	1082	AAREAGAAVRRPLGPE	Homo sapiens
1561	11968	Putative Leukocyte Platelet-Activating Factor Receptor (HUMNPIIY20)	AAB97766.1	1083	LRYRRPPREKIGRRRA	Homo sapiens
1562	11968	Putative Leukocyte Platelet-Activating Factor Receptor (HUMNPIIY20)	AAB97766.1	1085	PRELAAGQSFHGCLYR	Homo sapiens
1563	11968	Putative Leukocyte Platelet-Activating Factor Receptor (HUMNPIIY20)	AAB97766.1	1086	CKTVRLSDVRVRPVNTYAR	Homo sapiens
1564	14198	Interleukin-8 Receptor B	P25025	802	EDFWKGEDLSNYSYSS	Homo sapiens
1565	14198	Interleukin-8 Receptor B	P25025	803	PPFLLDAAPCEPESLE	Homo sapiens
1566	14198	Interleukin-8 Receptor B	P25025	804	RRTVYSSNVSPACYE	Homo sapiens
1567	14198	Interleukin-8 Receptor B	P25025	805	SKDSLPKDSRPSFVGS	Homo sapiens
1568	14641	Calcitonin Receptor	P30988	766	PKPFLYVVGRKKMMDAQYKC	Homo sapiens
1569	14641	Calcitonin Receptor	P30988	769	VEVVPNGELVRRDPVSC	Homo sapiens
1570	14641	Calcitonin Receptor	P30988	771	KIQWNQRWGRRPSNRS	Homo sapiens
1571	14641	Calcitonin Receptor	P30988	772	CHQEPRNEPANNQGEESAE	Homo sapiens
1572	16041	C-C Chemokine Receptor 6	P51684	355	TKSFRLRSRTLPRSKIIC	Homo sapiens
1573	16041	C-C Chemokine Receptor 6	P51684	356	STFVFNQKYNTQGSDVCE	Homo sapiens
1574	16041	C-C Chemokine Receptor 6	P51684	357	TAANLGKMNRSCQSE	Homo sapiens
1575	16041	C-C Chemokine Receptor 6	P51684	358	RYSENISRQTSETADNDNAS	Homo sapiens
1576	16599	Smoothened	NP_005622.1	2595	CPLAPPPELHPPAPAP	Homo sapiens
1577	16599	Smoothened	NP_005622.1	2666	CAIVERERGWPDFLR	Homo sapiens
1578	16599	Smoothened	NP_005622.1	2667	CTNEVQNIKFNSSGQ	Homo sapiens
1579	16599	Smoothened	NP_005622.1	2668	CEVPLVRTDNPKSWYE	Homo sapiens
1580	16599	Smoothened	NP_005622.1	2669	CRADGTMRLGEPTSNE	Homo sapiens

1581	16599	Smoothened	NP_005622.1	2670	EAEISPELQKRLGRKK	Homo sapiens
1582	16599	Smoothened	NP_005622.1	2671	ANVTIGLPTKQPIPDC	Homo sapiens
1583	17250	G Protein-Coupled Receptor GPR45	O43898	1227	SNASDSGSTQLPAPLR	Homo sapiens
1584	17250	G Protein-Coupled Receptor GPR45	O43898	1228	CVLGYTELPADRAYVV	Homo sapiens
1585	17250	G Protein-Coupled Receptor GPR45	O43898	1249	LNTVRKNAVRVHNQSD	Homo sapiens
1586	17250	G Protein-Coupled Receptor GPR45	O43898	1272	KVPERIRRRIQPSTVYC	Homo sapiens
1587	17250	G Protein-Coupled Receptor GPR45	O43898	1273	DSLDLRQLTRAGLRRL	Homo sapiens
1588	17345	G Protein-Coupled Receptor D6	LR13	363	EDADAENSSFYYYDYLDE	Homo sapiens
1589	17345	G Protein-Coupled Receptor D6	LR13	364	DKYLEIVHAQPYHRLRTR	Homo sapiens
1590	17345	G Protein-Coupled Receptor D6	LR13	365	CVLVRLRPAGQGRALK	Homo sapiens
1591	17345	G Protein-Coupled Receptor D6	LR13	366	DLGERQSENYPNKEDVGNK	Homo sapiens
1592	17535	Gaba(b) Receptor 1	O95375	188	EKLTKRLKRHPEETGGFQEA	Homo sapiens
1593	17535	Gaba(b) Receptor 1	O95375	189	KKEEKKEWRKTLEPWK	Homo sapiens
1594	17535	Gaba(b) Receptor 1	O95375	190	DPLHRTIETFAKEEPKEDID	Homo sapiens
1595	17535	Gaba(b) Receptor 1	O95375	191	YEIEYVCRGEREVVGPKVRK	Homo sapiens
1596	17666	Glucagon-Like Peptide 1 Receptor	AAA17021.1	1205	SLWETVQKWREYRRQC	Homo sapiens
1597	17666	Glucagon-Like Peptide 1 Receptor	AAA17021.1	1206	LQKDNSSLPWRDLSEC	Homo sapiens
1598	17666	Glucagon-Like Peptide 1 Receptor	AAA17021.1	1208	CIVVSKLKANLMCKTD	Homo sapiens
1599	17666	Glucagon-Like Peptide 1 Receptor	AAA17021.1	1209	RWRLEHLHIQRDSSMKPLKC	Homo sapiens
1600	18471	G Protein-Coupled Receptor LOC51210	NP_057456.1	1520	CQVDETEEPDVHLPQP	Homo sapiens
1601	18471	G Protein-Coupled Receptor LOC51210	NP_057456.1	1521	REGLEAAGAAGASAASYSS	Homo sapiens
1602	18471	G Protein-Coupled Receptor LOC51210	NP_057456.1	1522	KLPSARAKIRITSSPI	Homo sapiens
1603	18471	G Protein-Coupled	NP_057456.1	1523	ESKSSIKRVLAITTVLS	Homo sapiens

		Receptor LOC51210				
1604	18471	G Protein-Coupled Receptor LOC51210	NP_057456.1	1524	QGTLEILYPDAHLSAED	Homo sapiens
1605	18471	G Protein-Coupled Receptor LOC51210	NP_057456.1	1525	PKTPLKERISLPSRRS	Homo sapiens
1606	19072	G Protein-Coupled Receptor Ls19072	ENSP00000164265	2030	SVVQLRRQRPDFEWNEGLC	Homo sapiens
1607	19072	G Protein-Coupled Receptor Ls19072	ENSP00000164265	2032	PAVGWHDTSERFYTHGC	Homo sapiens
1608	19072	G Protein-Coupled Receptor Ls19072	ENSP00000164265	2047	AVQVGRQADRRAFTVPT	Homo sapiens
1609	19501	G Protein-Coupled Receptor KIAA0758	Q9UIZ3	1513	EHEPAGEEALRQKRAVATK	Homo sapiens
1610	19501	G Protein-Coupled Receptor KIAA0758	Q9UIZ3	1514	ALRQKRAVATKSPTAE	Homo sapiens
1611	19501	G Protein-Coupled Receptor KIAA0758	Q9UIZ3	1515	CEKEVLSSNVSWRYEEQQLE	Homo sapiens
1612	19501	G Protein-Coupled Receptor KIAA0758	Q9UIZ3	1518	RLANNTGGWDSSGCYVEEGD	Homo sapiens
1613	19501	G Protein-Coupled Receptor KIAA0758	Q9UIZ3	1519	CKQEKSSLFQISKSIG	Homo sapiens
1614	21632	G Protein-Coupled Receptor Ls21632	BAA96055.1	2164	CTAFQRREGGVPGTRPGSPG	Homo sapiens
1615	21632	G Protein-Coupled Receptor Ls21632	BAA96055.1	2166	APGTRASRRCDRAGRWE	Homo sapiens
1616	21632	G Protein-Coupled Receptor Ls21632	BAA96055.1	2167	CPAERVANNRGDFRWPR	Homo sapiens
1617	21632	G Protein-Coupled Receptor Ls21632	BAA96055.1	2171	QNPPPEPEPPADQQLRFRC	Homo sapiens
1618	21632	G Protein-Coupled Receptor Ls21632	BAA96055.1	2175	VPLGGGAPGTRASRRC	Homo sapiens
1619	22315	G Protein-Coupled Receptor GPR92/GPR93	LR29	425	PAARVHRPSRCRYRD	Homo sapiens
1620	22315	G Protein-Coupled Receptor GPR92/GPR93	LR29	426	TLARPDATQSQRRRKTVRL	Homo sapiens
1621	22315	G Protein-Coupled Receptor GPR92/GPR93	LR29	427	RSKLVAASVPARDRVRG	Homo sapiens
1622	22315	G Protein-Coupled Receptor GPR92/GPR93	LR29	428	AQSERSAVTTDATRPD	Homo sapiens

1623	22925	Latrophilin-3	O94867	1138	CSGKSTESSIGSGKTSGSR	Homo sapiens
1624	22925	Latrophilin-3	O94867	1140	ENHQPHHYTRRRIPQD	Homo sapiens
1625	22925	Latrophilin-3	O94867	1141	ESVTTSTQTEPPPAKC	Homo sapiens
1626	22925	Latrophilin-3	O94867	1497	SSASLNREGLLNNARD	Homo sapiens
1627	25359	G Protein-Coupled Receptor GPR34	O95853	1255	DRYIKINRSIQQRKAIT	Homo sapiens
1628	25359	G Protein-Coupled Receptor GPR34	O95853	1257	CFHYRDKHNAKGEAIFN	Homo sapiens
1629	25359	G Protein-Coupled Receptor GPR34	O95853	1258	RISKRRSKFPNSGKYA	Homo sapiens
1630	25359	G Protein-Coupled Receptor GPR34	O95853	1259	CQLLFRRFQGEPSRSESTSE	Homo sapiens
1631	30698	G Protein-Coupled Receptor Ls30698	CAC27252.1	2721	RLQEIILTFEKINKTR	Homo sapiens
1632	30698	G Protein-Coupled Receptor Ls30698	CAC27252.1	2722	KGKSRAAENASLGPTN	Homo sapiens
1633	30698	G Protein-Coupled Receptor Ls30698	CAC27252.1	2723	LLFGTIMDHKIRDALR	Homo sapiens
1634	30698	G Protein-Coupled Receptor Ls30698	CAC27252.1	2724	RPSIGSSKSQDVVIIMRI	Homo sapiens
1635	30875	G Protein-Coupled Receptor GPR87/GPR95	NP_076404.1	1579	KLPNNELHGQESHNSGN	Homo sapiens
1636	30875	G Protein-Coupled Receptor GPR87/GPR95	NP_076404.1	1580	SGNRSDGPGKNTTLHNEFD	Homo sapiens
1637	30875	G Protein-Coupled Receptor GPR87/GPR95	NP_076404.1	1581	RQFISQSSRKRKHNQSIR	Homo sapiens
1638	30875	G Protein-Coupled Receptor GPR87/GPR95	NP_076404.1	1582	SHLDRLLDESAQKILYYC	Homo sapiens
1639	30875	G Protein-Coupled Receptor GPR87/GPR95	NP_076404.1	1584	CRSFSRRLFKKSNIRTRSE	Homo sapiens
1640	30875	G Protein-Coupled Receptor GPR87/GPR95	NP_076404.1	1585	ESIRSLQSVRRSEVRIYYD	Homo sapiens
1641	31568	G Protein-Coupled Receptor RE2	O75963	331	CRKELSNLTEEEGGEGGV	Homo sapiens
1642	31568	G Protein-Coupled Receptor RE2	O75963	332	EEDAQRTGRKNSSTSTSSS	Homo sapiens
1643	31568	G Protein-Coupled Receptor RE2	O75963	333	CFGDRYYREPFVQRQRTSR	Homo sapiens
1644	31568	G Protein-Coupled	O75963	334	HSSSTGDTGFSCSQDSGNL	Homo sapiens

		Receptor RE2				
1645	36534	G Protein-Coupled Receptor GPR49	O75473	1232	CQKLQKIDLRHNEIYEIKVD	Homo sapiens
1646	36534	G Protein-Coupled Receptor GPR49	O75473	1233	NKGDNSSMDDLHKKDA	Homo sapiens
1647	36534	G Protein-Coupled Receptor GPR49	O75473	1234	QDERDLEDFLLDFEED	Homo sapiens
1648	36534	G Protein-Coupled Receptor GPR49	O75473	1235	ERGFSVKYSAKFETKA	Homo sapiens
1649	36534	G Protein-Coupled Receptor GPR49	O75473	1236	RSKHPSLMSINSDDVEKQSC	Homo sapiens
1650	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NP_004727.1	2597	DAQKESTGVTTLRQRR	Homo sapiens
1651	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NP_004727.1	2600	CKKINQLISETEAVVTN	Homo sapiens
1652	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NP_004727.1	2610	ADDQTLLEQMMDQDDG	Homo sapiens
1653	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NP_004727.1	2672	KYNQSISLRRPRLASQ	Homo sapiens
1654	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NP_004727.1	2673	KRYFAKFEEKFFQTC	Homo sapiens
1655	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	NP_004727.1	2674	DGDRQKAMKRLRVPPL	Homo sapiens
1656	40881	Lung Seven Transmembrane Receptor 2 (LUSTR2)	CAC28410.1	2103	RVRSGRVRSYSTRDFQDC	Homo sapiens
1657	40881	Lung Seven Transmembrane Receptor 2 (LUSTR2)	CAC28410.1	2105	CNNSVPGKEHPFDITVMIRE	Homo sapiens
1658	40881	Lung Seven Transmembrane Receptor 2 (LUSTR2)	CAC28410.1	2106	APSKPGLPKPQATVPRKVD	Homo sapiens
1659	40881	Lung Seven Transmembrane Receptor 2 (LUSTR2)	CAC28410.1	2135	AASKPKSTPAVIQGPSGKD	Homo sapiens
1660	42697	G Protein-Coupled Receptor GPR64	O00406	1261	KRSELNKTLQTLSETYFIMC	Homo sapiens
1661	42697	G Protein-Coupled Receptor GPR64	O00406	1262	GNASTERNGVSFSVQNGDVC	Homo sapiens
1662	42697	G Protein-Coupled Receptor GPR64	O00406	1263	CRIKKKKQLGAQRKTSIQD	Homo sapiens
1663	42697	G Protein-Coupled Receptor GPR64	O00406	1264	DFTGKQHMFNEKEDSC	Homo sapiens

1664	45937	KIAA1624 Protein	AAK57695	2072	PNVNPASAGNQTQKTQD	Homo sapiens
1665	45937	KIAA1624 Protein	AAK57695	2073	RVKSPPEAGTQLPKIIFS	Homo sapiens
1666	45937	KIAA1624 Protein	AAK57695	2074	KDGYMVVNVSSLSLNEPED	Homo sapiens
1667	45937	KIAA1624 Protein	AAK57695	2076	RSTVDSKAMGEKSFSVHNNG	Homo sapiens
1668	50847	Neurotensin Receptor type 2	O95665	1265	CQPLRARSLLTPRRTR	Homo sapiens
1669	50847	Neurotensin Receptor type 2	O95665	1266	GQKHELETADGEPEPASRVC	Homo sapiens
1670	50847	Neurotensin Receptor type 2	O95665	1267	KKTFIQGGQVSLVRHKD	Homo sapiens
1671	50847	Neurotensin Receptor type 2	O95665	1269	CGEHHPMKRLPPKPQSP	Homo sapiens
1672	50847	Neurotensin Receptor type 2	O95665	2294	STSTPGSSTPSRLELLSEE	Homo sapiens
1673	50847	Neurotensin Receptor type 2	O95665	2301	METSSPRPPRPSSNPG	Homo sapiens
1674	50847	Neurotensin Receptor type 2	O95665	2302	CSQVPSTSTPGSSTPSR	Homo sapiens
1675	53440	G Protein-Coupled Receptor LS53440	LR76	1850	DPNGNESSATYFILIG	Homo sapiens
1676	53440	G Protein-Coupled Receptor LS53440	LR76	1851	RHATVLTLPRVTKIGV	Homo sapiens
1677	53440	G Protein-Coupled Receptor LS53440	LR76	1852	ILKTVLGLTREAQAKA	Homo sapiens
1678	53440	G Protein-Coupled Receptor LS53440	LR76	1853	HRFSKRRDSPLPVILAN	Homo sapiens
1679	53440	G Protein-Coupled Receptor LS53440	LR76	1854	KEIRQRILRLFHVATHASE	Homo sapiens
1680	54053	Gaba(b) Receptor 2	O75899	1416	GEDIEISDTESFSNDPC	Homo sapiens
1681	54053	Gaba(b) Receptor 2	O75899	1417	SSKQIKTISGKTPQQYE	Homo sapiens
1682	54053	Gaba(b) Receptor 2	O75899	1419	AATQNRRFQFTQNQKKE	Homo sapiens
1683	54053	Gaba(b) Receptor 2	O75899	1420	CKDPIEDINSPEHIQRR	Homo sapiens
1684	55728	ETL protein	NP_071442.1	2113	CVLSRKIQEEYYRLFKNVP	Homo sapiens
1685	55728	ETL protein	NP_071442.1	2114	CIAANINKTLTKIRSIKEP	Homo sapiens
1686	55728	ETL protein	NP_071442.1	2115	KLSVNHRRTHLTKLMHTVE	Homo sapiens
1687	55728	ETL protein	NP_071442.1	2116	EKITFTLSHRKVTDRYRSLC	Homo sapiens
1688	55728	ETL protein	NP_071442.1	2117	SSSLLGYKNNTISAKD	Homo sapiens
1689	56923	Muscarinic acetylcholine	P20309	1421	CSSYELQQQSMKRSNRRK	Homo sapiens

		Receptor M3				
1690	56923	Muscarinic acetylcholine Receptor M3	P20309	1422	KPSSEQMDQDHSSSDSWNNN	Homo sapiens
1691	56923	Muscarinic acetylcholine Receptor M3	P20309	1423	DLERKADKLQAQKSVD	Homo sapiens
1692	56923	Muscarinic acetylcholine Receptor M3	P20309	1424	KEATLAKRFALKTRSQ	Homo sapiens
1693	57180	Leukotriene B4 Receptor BLTR2	NP_062813.1	2097	PPTCRPRRMSVCYRPPGNE	Homo sapiens
1694	57180	Leukotriene B4 Receptor BLTR2	NP_062813.1	2098	CLAVTRPFLAPRLRSPALAR	Homo sapiens
1695	57180	Leukotriene B4 Receptor BLTR2	NP_062813.1	2099	RGARWGSGRHGARVGR	Homo sapiens
1696	57180	Leukotriene B4 Receptor BLTR2	NP_062813.1	2100	TAGDLLPRAGPRFLTR	Homo sapiens
1697	57180	Leukotriene B4 Receptor BLTR2	NP_062813.1	2101	EGSGEARGGGRSREGTME	Homo sapiens
1698	57180	Leukotriene B4 Receptor BLTR2	NP_062813.1	2102	RTTPQLKVVGQGRGNGD	Homo sapiens
1699	73584	Cadherin EGF LAG Seven-Pass G-Type Receptor 1 (CELSR1/Flamingo)	NP_055061.1	1909	RSAPTALSRRLRARTHLPGC	Homo sapiens
1700	73584	Cadherin EGF LAG Seven-Pass G-Type Receptor 1 (CELSR1/Flamingo)	NP_055061.1	1910	VRGSHGEPDASLMPRSC	Homo sapiens
1701	73584	Cadherin EGF LAG Seven-Pass G-Type Receptor 1 (CELSR1/Flamingo)	NP_055061.1	1911	RKEDSVLMEATSGGPTSFR	Homo sapiens
1702	73584	Cadherin EGF LAG Seven-Pass G-Type Receptor 1 (CELSR1/Flamingo)	NP_055061.1	1912	DQNKADIGGMLPGLTVRSV	Homo sapiens
1703	73584	Cadherin EGF LAG Seven-Pass G-Type Receptor 1 (CELSR1/Flamingo)	NP_055061.1	1913	PAGWPDQSLAESDSEDPSG	Homo sapiens
1704	74514	5-HT5A Receptor	NP_076917.1	2118	ETNHSLGKDDLRPSSP	Homo sapiens
1705	74514	5-HT5A Receptor	NP_076917.1	2119	SLVHELSGRRWQLGRRLC	Homo sapiens
1706	74514	5-HT5A Receptor	NP_076917.1	2120	LLFGWGETYSEGSEEC	Homo sapiens
1707	74514	5-HT5A Receptor	NP_076917.1	2121	FRVGSRKTNSVSPISE	Homo sapiens
1708	74514	5-HT5A Receptor	NP_076917.1	2122	RHATVTFQPEGDTWREQK	Homo sapiens

1709	81765	Thromboxane A2 Receptor	P21731	1277	GITRPFSRPAVASQRR	Homo sapiens
1710	81765	Thromboxane A2 Receptor	P21731	1278	CHVYHGQEAAQQRPRDSEVE	Homo sapiens
1711	81765	Thromboxane A2 Receptor	P21731	1279	RNPPAMSPAGQLSRTTE	Homo sapiens
1712	81765	Thromboxane A2 Receptor	P21731	1280	RRLQPRLSTRPRRVSLC	Homo sapiens
1713	98519	Chemokine (C motif) XC Receptor 1 (CCXCR1)	AAA62837.1	155	RYLSVVSPLSTLRVPTLRC	Homo sapiens
1714	98519	Chemokine (C motif) XC Receptor 1 (CCXCR1)	AAA62837.1	156	SSILDTIFHKVLSSGCDYSE	Homo sapiens
1715	98519	Chemokine (C motif) XC Receptor 1 (CCXCR1)	AAA62837.1	157	VEILRTLFRSRSKRRHRTVK	Homo sapiens
1716	98519	Chemokine (C motif) XC Receptor 1 (CCXCR1)	AAA62837.1	158	QTLFRTQIIRSCEAKQQLE	Homo sapiens
1717	98519	Chemokine (C motif) XC Receptor 1 (CCXCR1)	AAA62837.1	159	RLQAPSPASIPHSPGAFAYE	Homo sapiens
1718	130108	G Protein-Coupled Receptor GPR75	NP_006785.1	1589	RIEPYYSIYNSSPSQEE	Homo sapiens
1719	130108	G Protein-Coupled Receptor GPR75	NP_006785.1	1590	IMIAQTLRKNAQVRKC	Homo sapiens
1720	130108	G Protein-Coupled Receptor GPR75	NP_006785.1	1591	RNQNYNKLQHVQTRGYTKS	Homo sapiens
1721	130108	G Protein-Coupled Receptor GPR75	NP_006785.1	1592	SRLQLVSAINLSTAKD	Homo sapiens
1722	130108	G Protein-Coupled Receptor GPR75	NP_006785.1	1593	CKQKTRLRAMGKGNLEVNR	Homo sapiens
1723	130108	G Protein-Coupled Receptor GPR75	NP_006785.1	1594	NSAYMLSPKPQKKFVDQAC	Homo sapiens
1724	133117	G Protein-Coupled Receptor RAIG1	AAC98506.1	1218	CKVQDSNRRKMLPTQF	Homo sapiens
1725	133117	G Protein-Coupled Receptor RAIG1	AAC98506.1	1219	HAVSLTKLVRGRKPLS	Homo sapiens
1726	133117	G Protein-Coupled Receptor RAIG1	AAC98506.1	1220	NVNVFSELSAPRRNED	Homo sapiens
1727	133117	G Protein-Coupled Receptor RAIG1	AAC98506.1	1221	TKQRNPMDYPVEDAFC	Homo sapiens
1728	133117	G Protein-Coupled Receptor RAIG1	AAC98506.1	1222	CKPQLVKKSYGVENRA	Homo sapiens
1729	152198	Tachykinin Receptor 2	AAB05897.1	1286	RRAVPGHQAHGANLRH	Homo sapiens
1730	152198	Tachykinin Receptor 2	AAB05897.1	1287	KEDKLELTPTTSLSTRVNRC	Homo sapiens
1731	152198	Tachykinin Receptor 2	AAB05897.1	1288	KETLFMAGDTAPSEATSGEA	Homo sapiens

1732	152198	Tachykinin Receptor 2	AAB05897.1	1290	CVVAWPEDSGGKTLLL	Homo sapiens
1733	152201	Thyrotropin Receptor	P16473	1445	RQRKSVNALNSPLHQE	Homo sapiens
1734	152201	Thyrotropin Receptor	P16473	1446	KFQDTHNNAHYYVFFEEQED	Homo sapiens
1735	152201	Thyrotropin Receptor	P16473	1449	CHVKIYITVRNPQYNPGDK	Homo sapiens
1736	152201	Thyrotropin Receptor	P16473	1450	CKRQAQAYRGQRVPPKNSTD	Homo sapiens
1737	152245	C-C Chemokine Receptor 2	NP_000639.1	1896	SRSRFIRNTNESGEEVTT	Homo sapiens
1738	152245	C-C Chemokine Receptor 2	NP_000639.1	1898	CQKEDSVYVCGPYFPRGWNN	Homo sapiens
1739	152245	C-C Chemokine Receptor 2	NP_000639.1	1899	SGEEVTTFFDYDYGAPCHKF	Homo sapiens
1740	152299	Interleukin-8 Receptor A	P25024	806	DFDDLNFTGMPPADEDYSPC	Homo sapiens
1741	152299	Interleukin-8 Receptor A	P25024	807	CWGLSMNLSLPFFLFRQAYH	Homo sapiens
1742	152299	Interleukin-8 Receptor A	P25024	808	RHRVTSYTSSSVNVSSN	Homo sapiens
1743	152299	Interleukin-8 Receptor A	P25024	1490	CMLETETLNKYVVIIAYALV	Homo sapiens
1744	158822	Mas Proto-Oncogene	NP_002368.1	1527	EEPTNISTGRNASVGNAHRQ	Homo sapiens
1745	158822	Mas Proto-Oncogene	NP_002368.1	1528	RRNPFTVYITHLSIAD	Homo sapiens
1746	158822	Mas Proto-Oncogene	NP_002368.1	1529	YVMCIDREEESHSRNDCRAV	Homo sapiens
1747	158822	Mas Proto-Oncogene	NP_002368.1	1530	SSTILVVKIRKNTWASHSSK	Homo sapiens
1748	158822	Mas Proto-Oncogene	NP_002368.1	1531	TRAFKDEMQPRRQKDNC	Homo sapiens
1749	159152	G Protein-Coupled Receptor GPR43	NP_005297.1	1578	ERYLGVAFPVQYKLSRRPL	Homo sapiens
1750	159152	G Protein-Coupled Receptor GPR43	NP_005297.1	1586	QYLNTTEQVRSGNEITC	Homo sapiens
1751	159152	G Protein-Coupled Receptor GPR43	NP_005297.1	1588	EGTNEDRGVGQGEGMPSSD	Homo sapiens
1752	159152	G Protein-Coupled Receptor GPR43	NP_005297.1	1616	RGLQVLRNQGSSLLGRRGKD	Homo sapiens
1753	159973	Vasoactive Intestinal Polypeptide Receptor 1	P32241	1292	KQCLEEAQLENETIGCS	Homo sapiens
1754	159973	Vasoactive Intestinal Polypeptide Receptor 1	P32241	1296	KDLALFDSGESDQCSE	Homo sapiens
1755	159973	Vasoactive Intestinal Polypeptide Receptor 1	P32241	1297	LQKLRPPDIRKSDSSP	Homo sapiens
1756	159973	Vasoactive Intestinal Polypeptide Receptor 1	P32241	1298	NPKYRHPSGGSNGATC	Homo sapiens
1757	160040	Vasoactive Intestinal Polypeptide Receptor 2	P41587	1299	KVFSNFYSKAGNISKNC	Homo sapiens
1758	160040	Vasoactive Intestinal Polypeptide Receptor 2	P41587	1301	CGYSDPEDESKITFYI	Homo sapiens
1759	160040	Vasoactive Intestinal	P41587	1305	KRKWRSRCPTPSASRD	Homo sapiens

		Polypeptide Receptor 2				
1760	160040	Vasoactive Intestinal Polypeptide Receptor 2	P41587	1306	CGSSFSRNGSEGALQFHR	Homo sapiens
1761	160055	Motilin Receptor (GPR38)	AAC26081.1	132	REPPWPALPPCDERRCS	Homo sapiens
1762	160055	Motilin Receptor (GPR38)	AAC26081.1	134	SPPSGPETAEAAALFSREC	Homo sapiens
1763	160055	Motilin Receptor (GPR38)	AAC26081.1	135	SSRRPLRGPAASGRERGHRQ	Homo sapiens
1764	160055	Motilin Receptor (GPR38)	AAC26081.1	136	RKSRPRGFHRSRDTAG	Homo sapiens
1765	160059	G Protein-coupled Receptor GPR40	NP_005294.1	1595	NPLVTGYLGRGPGLKTVC	Homo sapiens
1766	160059	G Protein-coupled Receptor GPR40	NP_005294.1	1596	GRYLGAAFPLGYQAFRRPC	Homo sapiens
1767	160059	G Protein-coupled Receptor GPR40	NP_005294.1	1597	CLEAWDPASAGPARFS	Homo sapiens
1768	160059	G Protein-coupled Receptor GPR40	NP_005294.1	1598	CLRALARSGLTHRRKLR	Homo sapiens
1769	160059	G Protein-coupled Receptor GPR40	NP_005294.1	1599	NASNVASFLYPNLGGSWRK	Homo sapiens
1770	160059	G Protein-coupled Receptor GPR40	NP_005294.1	1617	TVSLPLKAVEALASGA	Homo sapiens
1771	160059	G Protein-coupled Receptor GPR40	NP_005294.1	1618	DHSNTSLGINTPVNGSPVC	Homo sapiens
1772	160189	G Protein-Coupled Receptor GPR54	BAB55446	1926	CSEAFPSRALERAFALY	Homo sapiens
1773	160189	G Protein-Coupled Receptor GPR54	BAB55446	1927	ERAGAVRAKVSRLVAAVV	Homo sapiens
1774	160189	G Protein-Coupled Receptor GPR54	BAB55446	1928	RRPGPSDPAAPHAELHRLGS	Homo sapiens
1775	160189	G Protein-Coupled Receptor GPR54	BAB55446	1929	GAPANASGCPGCGANASD	Homo sapiens
1776	160202	Adrenomedullin Receptor (ADMR)	O15218	390	DLFNHTLSECHVELSQST	Homo sapiens
1777	160202	Adrenomedullin Receptor (ADMR)	O15218	391	NVLTACRLRQPGQPKSRRHC	Homo sapiens
1778	160202	Adrenomedullin Receptor (ADMR)	O15218	392	KDQTKAGTCASSSSCSTQ	Homo sapiens
1779	160202	Adrenomedullin Receptor (ADMR)	O15218	484	KGDSQPAAAAPHPEPSLS	Homo sapiens
1780	160204	G Protein-Coupled Receptor RTA	LR85	1977	CRARRRQRSTKLNHVILA	Homo sapiens

1781	160204	G Protein-Coupled Receptor RTA	LR85	1983	CPGLSEAPELYRRGFLTIEQ	Homo sapiens
1782	160204	G Protein-Coupled Receptor RTA	LR85	1985	RDGAELGEAGGSTPNTVT	Homo sapiens
1783	160204	G Protein-Coupled Receptor RTA	LR85	2173	LAGRDKSQRLWEPLRV	Homo sapiens
1784	160206	G Protein-Coupled Receptor GPR32	NP_001497.1	1678	RTTRKWNGCTHCYLAFNSD	Homo sapiens
1785	160206	G Protein-Coupled Receptor GPR32	NP_001497.1	1679	RAKLLREGWVHANRPKR	Homo sapiens
1786	160206	G Protein-Coupled Receptor GPR32	NP_001497.1	1680	RRVMLKEIYHPRMLLI	Homo sapiens
1787	160206	G Protein-Coupled Receptor GPR32	NP_001497.1	1682	SALARAFGEEEFLSSC	Homo sapiens
1788	160206	G Protein-Coupled Receptor GPR32	NP_001497.1	1683	RSCSRKMNSSGCLSEE	Homo sapiens
1789	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	AAD21055.1	151	PGPDRDATCNSRQAALAVSK	Homo sapiens
1790	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	AAD21055.1	152	SSHAAVSLRLQHRGRRRPGR	Homo sapiens
1791	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	AAD21055.1	153	DDSELGGAGSSRRRRTSSTA	Homo sapiens
1792	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	AAD21055.1	154	DGPPEPGAEQHLELEPGPRR	Homo sapiens
1793	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2220	CPILEQMSRLQSHSNTSIRY	Homo sapiens
1794	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2221	RYIDHAAVLLHGLASLLGLV	Homo sapiens
1795	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2222	CRMRQTVVTTWVLHLALSDL	Homo sapiens
1796	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2223	SASLPFFTYFLAVGHSWE	Homo sapiens
1797	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2224	CLVLWALAVLNTVPYFVFRD	Homo sapiens
1798	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2225	CYYNVLLLNPGPDRDAT	Homo sapiens
1799	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2226	CNSRQAALAVSKFLLAFLVP	Homo sapiens
1800	160210	G Protein-Coupled	NP_004769.1	2228	RGLPFVTSLAFFNSVANPVL	Homo sapiens

Receptor GPR44 (CRTH2)

1801	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2229	CSRPEEPRGPARLLGWLLGS	Homo sapiens
1802	160210	G Protein-Coupled Receptor GPR44 (CRTH2)	NP_004769.1	2230	CAASPQTGPLNRALSS	Homo sapiens
1803	160212	G Protein-Coupled Receptor GPR52	Q9Y2T5	444	KEINDRRARFPSHEVDSSRE	Homo sapiens
1804	160212	G Protein-Coupled Receptor GPR52	Q9Y2T5	445	CVKDQEAQEPKPRKRANS	Homo sapiens
1805	160212	G Protein-Coupled Receptor GPR52	Q9Y2T5	446	RWTEWRILNMSSGIVNASER	Homo sapiens
1806	160212	G Protein-Coupled Receptor GPR52	Q9Y2T5	622	HSCPLGFGHYSVVDVCIFE	Homo sapiens
1807	160217	G Protein-Coupled Receptor GPR55	AAD22410.1	161	GKVEKYMCFHNMSDDTWSAK	Homo sapiens
1808	160217	G Protein-Coupled Receptor GPR55	AAD22410.1	162	RSIHILLGRRDHTQDWVQQK	Homo sapiens
1809	160217	G Protein-Coupled Receptor GPR55	AAD22410.1	163	CRAKQSISFFLQLSM	Homo sapiens
1810	160217	G Protein-Coupled Receptor GPR55	AAD22410.1	164	KEFRMNIRAHRPSRVQLVLQ	Homo sapiens
1811	160219	G Protein-Coupled Receptor GPR35	AAC52028.1	2	AQRPPTDVGQAEATRKAAR	Homo sapiens
1812	160219	G Protein-Coupled Receptor GPR35	AAC52028.1	3	KEFQEASALAVAPRAKAHK	Homo sapiens
1813	160219	G Protein-Coupled Receptor GPR35	AAC52028.1	123	GGFCFRSTRHNFNSMR	Homo sapiens
1814	160219	G Protein-Coupled Receptor GPR35	AAC52028.1	125	ETIRRALYITSKLSDANC	Homo sapiens
1815	160221	G Protein-Coupled Receptor GPR27	LR6	335	FPPVLDGGGDDEDAPCALEQ	Homo sapiens
1816	160221	G Protein-Coupled Receptor GPR27	LR6	338	RGARRLLVLEEFKTEKRLC	Homo sapiens
1817	160221	G Protein-Coupled Receptor GPR27	LR6	496	NASEPGGSGGGEAAALGLK	Homo sapiens
1818	160221	G Protein-Coupled Receptor GPR27	O54897	515	GLRALACLPAVMLAARRA	Mus musculus
1819	160221	G Protein-Coupled Receptor GPR27	LR6	1291	RPAGPGRGARRLLVLE	Homo sapiens

1820	160222	G Protein-Coupled Receptor GPR72	NP_057624.1	1606	CQRPPKPQEDGQPSPV	Homo sapiens
1821	160222	G Protein-Coupled Receptor GPR72	NP_057624.1	1607	CNMIGDVTTEQYFALRRK	Homo sapiens
1822	160222	G Protein-Coupled Receptor GPR72	NP_057624.1	1610	EGRADEQSAEAALAVP	Homo sapiens
1823	160222	G Protein-Coupled Receptor GPR72	NP_057624.1	1611	QNFVGRRRYGAESQNPTVK	Homo sapiens
1824	160223	G Protein-Coupled Receptor G2A	NP_037477.1	1600	RIFRSIKQSMGLSAAQKAK	Homo sapiens
1825	160223	G Protein-Coupled Receptor G2A	NP_037477.1	1601	CDRFVAVVYALESRGRR	Homo sapiens
1826	160223	G Protein-Coupled Receptor G2A	NP_037477.1	1604	ATDHSRQEVSRIHKGWKE	Homo sapiens
1827	160223	G Protein-Coupled Receptor G2A	NP_037477.1	1605	KTDVTRLTHSRDTEELQS	Homo sapiens
1828	160224	Endothelin Type B Receptor-Like Protein 2 (ETBR-LP-2)	O60883	403	ETQEQQSRSKRGTEDEEAK	Homo sapiens
1829	160224	Endothelin Type B Receptor-Like Protein 2 (ETBR-LP-2)	O60883	404	SPNPDKDGGTPDSGQELR	Homo sapiens
1830	160224	Endothelin Type B Receptor-Like Protein 2 (ETBR-LP-2)	O60883	405	CQLVTWRVRGPPGRKSE	Homo sapiens
1831	160224	Endothelin Type B Receptor-Like Protein 2 (ETBR-LP-2)	O60883	406	AANGSDNKLKTEVSS	Homo sapiens
1832	160225	Sphingolipid Receptor Edg6	CAA04118.1	70	PRDSFRGSRSLSFRMRE	Homo sapiens
1833	160225	Sphingolipid Receptor Edg6	CAA04118.1	71	ERFATMVRPVAESGATKTSR	Homo sapiens
1834	160225	Sphingolipid Receptor Edg6	CAA04118.1	72	RLVQASGQKAPRPAAR	Homo sapiens
1835	160225	Sphingolipid Receptor Edg6	CAA04118.1	73	RAVEAHSGASTTDSSLRPRD	Homo sapiens
1836	160225	Sphingolipid Receptor Edg6	CAA04118.1	1914	IFRLVQASGQKAPRPAAR	Homo sapiens
1837	160225	Sphingolipid Receptor Edg6	CAA04118.1	1915	DSSLRPRDSFRGSRSLSFRM	Homo sapiens
1838	160225	Sphingolipid Receptor Edg6	CAA04118.1	1916	RSLSFRMREPLSSISSVR	Homo sapiens
1839	160225	Sphingolipid Receptor Edg6	CAA04118.1	1917	GPEDGGLGALRGLSVAASC	Homo sapiens
1840	160228	T-Cell Death-Associated Gene 8 (GPR65)	NP_003599.1	1625	ANIGSLCVSFLQPKKE	Homo sapiens
1841	160228	T-Cell Death-Associated Gene 8 (GPR65)	NP_003599.1	1626	ETIFNAVMLWEDETVVE	Homo sapiens
1842	160228	T-Cell Death-Associated Gene 8 (GPR65)	NP_003599.1	1627	CNRKVYQAVRHNKATENKE	Homo sapiens

1843	160228	T-Cell Death-Associated Gene 8 (GPR65)	NP_003599.1	1628	CILEHAVNFEDHSNSGKR	Homo sapiens
1844	160228	T-Cell Death-Associated Gene 8 (GPR65)	NP_003599.1	1629	CNTSQRQRKRILSVSTKD	Homo sapiens
1845	160228	T-Cell Death-Associated Gene 8 (GPR65)	NP_003599.1	2303	CDAEKSNFTLCYDKYPLEK	Homo sapiens
1846	160300	Encephalopsin	NP_055137.1	2131	CTVDWKSKDANDSSFV	Homo sapiens
1847	160300	Encephalopsin	NP_055137.1	2132	CVEDLQTIQVIKILKYEK	Homo sapiens
1848	160300	Encephalopsin	NP_055137.1	2133	CQRPAKDLPAAGSEMQIRP	Homo sapiens
1849	160300	Encephalopsin	NP_055137.1	2134	TSDESLSVDDSDKTIG	Homo sapiens
1850	160312	Sphingolipid Receptor Edg5	O95136	1018	ERHVAIAKVKLYGSDKSC	Homo sapiens
1851	160312	Sphingolipid Receptor Edg5	O95136	1019	RSRDLRREVLRPLQC	Homo sapiens
1852	160312	Sphingolipid Receptor Edg5	O95136	1020	QEHYNYTKETLETQET	Homo sapiens
1853	160312	Sphingolipid Receptor Edg5	O95136	1021	GRRRVGTPGHHLLPLR	Homo sapiens
1854	160314	G Protein-Coupled Receptor GPR103	ENSMPRT221753	1922	MMRKKAKFSLRENPVEETKG	Homo sapiens
1855	160314	G Protein-Coupled Receptor GPR103	ENSMPRT221753	1923	MMIEYSNFEKEYDDVTIKM	Homo sapiens
1856	160314	G Protein-Coupled Receptor GPR103	ENSMPRT221753	1924	CEQTEEKKKLKRHLALFRSE	Homo sapiens
1857	160314	G Protein-Coupled Receptor GPR103	ENSMPRT221753	1925	KKRVGDGSVLRTIHGKEMSK	Homo sapiens
1858	160317	Neuropeptide FF 2 Receptor	Q9Y5X5	463	DRARRERFIMNEKWDTNSSE	Homo sapiens
1859	160317	Neuropeptide FF 2 Receptor	Q9Y5X5	464	RKNQEQWHVVSRKKQKIIK	Homo sapiens
1860	160317	Neuropeptide FF 2 Receptor	Q9Y5X5	465	RKSAEKPQQELVMEELKE	Homo sapiens
1861	160317	Neuropeptide FF 2 Receptor	Q9Y5X5	500	RQSAGDRRRLGLSRQTAK	Homo sapiens
1862	160324	G Protein-Coupled Receptor GPR86/GPR94/P2Y13	NP_076403.1	1619	DRFLKIIRPLRNIFLKKP	Homo sapiens
1863	160324	G Protein-Coupled Receptor GPR86/GPR94/P2Y13	NP_076403.1	1620	MILSNKEATPSSVKKC	Homo sapiens
1864	160324	G Protein-Coupled Receptor GPR86/GPR94/P2Y13	NP_076403.1	1622	VYDSYRKSKSKDRKNN	Homo sapiens
1865	160324	G Protein-Coupled Receptor GPR86/GPR94/P2Y13	NP_076403.1	1623	ARVPYTHSQTNNKTDC	Homo sapiens

1866	160324	G Protein-Coupled Receptor GPR86/GPR94/P2Y13	NP_076403.1	1624	CMQGRKTTASSQENHSSQTD	Homo sapiens
1867	160329	Proteinase-Activated Receptor 4	O76067	1308	CANDSDTLELPDSSRA	Homo sapiens
1868	160329	Proteinase-Activated Receptor 4	O76067	1309	PLRARALRGRRLALGLC	Homo sapiens
1869	160329	Proteinase-Activated Receptor 4	O76067	1310	LQRQTFRLARSDRVLC	Homo sapiens
1870	160329	Proteinase-Activated Receptor 4	O76067	1311	RDKVRAGLFQRSPGDT	Homo sapiens
1871	160330	G Protein-Coupled-Receptor TM7XN1/GPR56	Q9Y653	1213	CELKRDLQLLSQFLKHPQK	Homo sapiens
1872	160330	G Protein-Coupled-Receptor TM7XN1/GPR56	Q9Y653	1214	TSVRFMGDMVSFEEDR	Homo sapiens
1873	160330	G Protein-Coupled-Receptor TM7XN1/GPR56	Q9Y653	1215	RQEEEQSEIMEYSVLLP	Homo sapiens
1874	160330	G Protein-Coupled-Receptor TM7XN1/GPR56	Q9Y653	1216	RTLFQRTKGRSGEAEKR	Homo sapiens
1875	160387	Glucagon-Like Peptide 2 Receptor	O95838	1312	GSLLEETTRKWAQYKQAC	Homo sapiens
1876	160387	Glucagon-Like Peptide 2 Receptor	O95838	1313	QTIENATDIWQDDSEC	Homo sapiens
1877	160387	Glucagon-Like Peptide 2 Receptor	O95838	1315	CPKKLSEGDGAEKLRK	Homo sapiens
1878	160387	Glucagon-Like Peptide 2 Receptor	O95838	1316	QQDHARWPRGSSLSEC	Homo sapiens
1879	160388	Latrophilin-1	O94910	1121	EPTSTHESEHQSGAWC	Homo sapiens
1880	160388	Latrophilin-1	O94910	1126	CEPREVRRVQWPATQQ	Homo sapiens
1881	160388	Latrophilin-1	O94910	1129	RSGDFPPGDGGPEPPR	Homo sapiens
1882	160388	Latrophilin-1	O94910	1131	CTAEDGATSRPLSSPPGRDS	Homo sapiens
1883	160388	Latrophilin-1	O94910	1706	RESAGKNYNKMHKRERTC	Homo sapiens
1884	160388	Latrophilin-1	O94910	1707	RDSPSYPDSSPEGPSEALP	Homo sapiens
1885	160390	Cadherin EGF LAG Seven-Pass G-Type Receptor 2 (CELSR2)	NP_001399.1	1938	QVGPCRSLGSRGRGSSGAC	Homo sapiens
1886	160390	Cadherin EGF LAG Seven-Pass G-Type Receptor 2 (CELSR2)	NP_001399.1	1939	CRDAGTELTGHLVPHHDGLR	Homo sapiens

1887	160390	Cadherin EGF LAG Seven-Pass G-Type Receptor 2 (CELSR2)	NP_001399.1	1940	CKLAQAPGLRAGERSPEESL	Homo sapiens
1888	160390	Cadherin EGF LAG Seven-Pass G-Type Receptor 2 (CELSR2)	NP_001399.1	1942	RVSDTPEGVNSLDPSHGES	Homo sapiens
1889	160390	Cadherin EGF LAG Seven-Pass G-Type Receptor 2 (CELSR2)	NP_001399.1	1943	RSGKSQPSYIPFLLREES	Homo sapiens
1890	160397	Latrophilin-2	O95490	1132	CEALDSKGIKWPQTQR	Homo sapiens
1891	160397	Latrophilin-2	O95490	1133	DILDAQLQELKPSEKD	Homo sapiens
1892	160397	Latrophilin-2	O95490	1136	RTHSLLYQPQKKVKSE	Homo sapiens
1893	160397	Latrophilin-2	O95490	1137	RDSPYPESSPDMEEDL	Homo sapiens
1894	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1630	CQEQKMLRTLDLSYNNIRD	Homo sapiens
1895	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1631	CDSYANLNTEDNSLQD	Homo sapiens
1896	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1632	KGTADAANVTSTLENEE	Homo sapiens
1897	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1633	ERSLSAKDIMKNGKSNHLK	Homo sapiens
1898	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1634	CNLEKEDLSENSQSSMIK	Homo sapiens
1899	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1635	KRRVTKKSGSVSVSIS	Homo sapiens
1900	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1636	CGTQSAHSDYADEEDS	Homo sapiens
1901	160411	G Protein-Coupled Receptor GPR48	NP_060960.1	1637	DEEDSFVSDSSDQVQAC	Homo sapiens
1902	160435	LS160435 Receptor	LR80	1918	ATILKLLRTEEAHGREQRR	Homo sapiens
1903	160435	LS160435 Receptor	LR80	1919	CRRVPRDTLDTRRESLFSAR	Homo sapiens
1904	160435	LS160435 Receptor	LR80	1920	PLSSKRWRRRRYAVAAC	Homo sapiens
1905	160435	LS160435 Receptor	LR80	1921	CRRMGPRSPSVIFMINL	Homo sapiens
1906	160889	Platelet Activating Receptor Homolog (H963)	O14626	1223	MMIPIKDIKEKSNVGC	Homo sapiens
1907	160889	Platelet Activating Receptor Homolog (H963)	O14626	1224	CLVIRQLYRNKDNENYP	Homo sapiens
1908	160889	Platelet Activating Receptor	O14626	1225	CSTRISLFKAKEATLL	Homo sapiens

		Homolog (H963)				
1909	160889	Platelet Activating Receptor Homolog (H963)	O14626	1226	ETFASPKETKAQKEKLRC	Homo sapiens
1910	161024	Protein A	NP_062832.1	1690	ESRAVGLPLGLSAGRRC	Homo sapiens
1911	161024	Protein A	NP_062832.1	1691	EDARGKRRSSLDGSESAK	Homo sapiens
1912	161024	Protein A	NP_062832.1	1692	RTVWEQCVAIMSEEDGD	Homo sapiens
1913	161024	Protein A	NP_062832.1	1693	CKVRFDANGATGPGSRD	Homo sapiens
1914	161024	Protein A	NP_062832.1	1694	RRLSHDETNIFSTPRE	Homo sapiens
1915	161024	Protein A	NP_062832.1	1695	GGPPEYLGQRHRLEDEED	Homo sapiens
1916	161024	Protein A	NP_062832.1	1696	REEITTFIDETPLPSP	Homo sapiens
1917	161024	Protein A	NP_062832.1	1697	RRPRPLGLSPRRLSLGSPE	Homo sapiens
1918	161214	Galanin Receptor GalR3	AAC35944.1	202	RYGALELCVPAWEDARR	Homo sapiens
1919	161214	Galanin Receptor GalR3	AAC35944.1	203	GAAAAEARRRATGRAGR	Homo sapiens
1920	161214	Galanin Receptor GalR3	AAC35944.1	204	ASRHFRARFRRLWPC	Homo sapiens
1921	161214	Galanin Receptor GalR3	AAC35944.1	205	RARRALRRVRPASSGPP	Homo sapiens
1922	161221	Urotensin-II Receptor (GPR14)	LR15	371	ERYAAVLRPLDTVQRPKG	Homo sapiens
1923	161221	Urotensin-II Receptor (GPR14)	LR15	372	RAYRRSQRASFKRARRPGAR	Homo sapiens
1924	161221	Urotensin-II Receptor (GPR14)	LR15	373	RNYRDHLRGRVRGPGSG	Homo sapiens
1925	161221	Urotensin-II Receptor (GPR14)	LR15	374	RARFQRCSGRSLSCSPQPTD	Homo sapiens
1926	161249	G Protein-Coupled Receptor GPR66	LR20	394	ARGHFDPEDLNLTDEALRLK	Homo sapiens
1927	161249	G Protein-Coupled Receptor GPR66	LR20	395	IGLRLRRERLLLMQEAKGRG	Homo sapiens
1928	161249	G Protein-Coupled Receptor GPR66	LR20	396	RGSAAARSRYTCRLQQH	Homo sapiens
1929	161249	G Protein-Coupled Receptor GPR66	LR20	397	ALCLGACCHRLRPRHSS	Homo sapiens
1930	161251	Purinergic Receptor P2Y10	O00398	859	CFFLLKPFRARDWKRRYD	Homo sapiens
1931	161251	Purinergic Receptor P2Y10	O00398	860	PFPILRSTDLNNNKSC	Homo sapiens
1932	161251	Purinergic Receptor P2Y10	O00398	862	QLSRHGSSVTRSRLMSKE	Homo sapiens
1933	161251	Purinergic Receptor P2Y10	O00398	863	LRQPPMAFQGISERQK	Homo sapiens
1934	161293	G Protein-Coupled Receptor Ls161293 (Herpes virus)	NP_042597.1	1672	YYDDLDDVDYEESAPC	Equine herpesvirus 2

1935	161293	G Protein-Coupled Receptor Ls161293 (Herpes virus)	NP_042597.1	1674	CDPYYPEMSTNVWRRAHVAK	Equine herpesvirus 2
1936	161293	G Protein-Coupled Receptor Ls161293 (Herpes virus)	NP_042597.1	1675	CYYVIIRRLLRRPSKK	Equine herpesvirus 2
1937	161293	G Protein-Coupled Receptor Ls161293 (Herpes virus)	NP_042597.1	1676	CKYIPFLSGDGEGKEGPT	Equine herpesvirus 2
1938	177147	Neuromedin K Receptor-Like (NK-4R)	NP_006670.1	1820	RNLTSSPAPTASPSPAPS	Homo sapiens
1939	177147	Neuromedin K Receptor-Like (NK-4R)	NP_006670.1	1821	PSWTPSPRPGPAHPFLQPP	Homo sapiens
1940	177147	Neuromedin K Receptor-Like (NK-4R)	NP_006670.1	1822	RSSHQKRGTTRDVGSNVC	Homo sapiens
1941	177147	Neuromedin K Receptor-Like (NK-4R)	NP_006670.1	1823	KSTSTTASFVSSSHMSVEE	Homo sapiens
1942	177168	Cysteinyl Leukotriene CYSLT1 Receptor	Q9Y271	1317	TSSPFLMAKPQKDEKNNTKC	Homo sapiens
1943	177168	Cysteinyl Leukotriene CYSLT1 Receptor	Q9Y271	1318	KKSMKKNLSSHKKAIG	Homo sapiens
1944	177168	Cysteinyl Leukotriene CYSLT1 Receptor	Q9Y271	1319	QRTIHLHFLHNETKPC	Homo sapiens
1945	177168	Cysteinyl Leukotriene CYSLT1 Receptor	Q9Y271	1320	RKHSLSSVTYVPRKKASLPE	Homo sapiens
1946	177191	Histamine H3 Receptor	Q9Y5N1	474	RAVSYRAQQGDTRRAVRK	Homo sapiens
1947	177191	Histamine H3 Receptor	Q9Y5N1	475	QRRTRLRLDGAREAAGPE	Homo sapiens
1948	177191	Histamine H3 Receptor	Q9Y5N1	476	QSFTQRFRLSRDRKVA	Homo sapiens
1949	177191	Histamine H3 Receptor	Q9Y5N1	477	RYGVGEAAVGAEAGEATLG	Homo sapiens
1950	177191	Histamine H3 Receptor	Q9Y5N1	1477	SSRGTERPRSLKRGSKPSAS	Homo sapiens
1951	177191	Histamine H3 Receptor	Q9Y5N1	1479	KPSASSASLEKRMKMVS	Homo sapiens
1952	177387	G Protein-Coupled Receptor ORF4	NP_064540.1	2052	RTTLFSFYFRDTPRANR	Homo sapiens
1953	177387	G Protein-Coupled Receptor ORF4	NP_064540.1	2053	RPEMSRGLLAVRGAFV	Homo sapiens
1954	177387	G Protein-Coupled Receptor ORF4	NP_064540.1	2059	CAVLSHRRAQPWALLLV	Homo sapiens
1955	177387	G Protein-Coupled Receptor ORF4	NP_064540.1	2733	RVLVSDSLFVICALSL	Homo sapiens

1956	180956	Lysophosphatidic Acid Receptor Edg7	AAF00530.1	1014	KRKTNVLSPHTSGSIS	Homo sapiens
1957	180956	Lysophosphatidic Acid Receptor Edg7	AAF00530.1	1015	CFSQENPERRPSRIPST	Homo sapiens
1958	180956	Lysophosphatidic Acid Receptor Edg7	AAF00530.1	1016	SYKDEDMYGTMKKMIC	Homo sapiens
1959	180956	Lysophosphatidic Acid Receptor Edg7	AAF00530.1	1017	VERHMSIMRMRVHSN	Homo sapiens
1960	189873	G Protein-Coupled Receptor GPR78	LR37	443	CQRMDTVTMKALALLAD	Homo sapiens
1961	189873	G Protein-Coupled Receptor GPR78	LR37	528	CSLRLPPEPERPRFAAFTAT	Homo sapiens
1962	189873	G Protein-Coupled Receptor GPR78	LR37	533	RGPLPPGICAHSAQGALRR	Homo sapiens
1963	189873	G Protein-Coupled Receptor GPR78	LR37	534	CRQAQARDLGAPWAVGLRSL	Homo sapiens
1964	189874	Neuromedin U Receptor 2	LR28	420	QQKLEDPFQKHLNSTEE	Homo sapiens
1965	189874	Neuromedin U Receptor 2	LR28	422	KKDKSLEADEGNANIQRPC	Homo sapiens
1966	189874	Neuromedin U Receptor 2	LR28	423	SQHDPQLPPAQRNIFLTEC	Homo sapiens
1967	189874	Neuromedin U Receptor 2	LR28	487	ILHPFRAKLQSTRRRALR	Homo sapiens
1968	189884	G Protein-Coupled Receptor Ls189884	LR27	415	CKKRGTKTQNLRNQIRSK	Homo sapiens
1969	189884	G Protein-Coupled Receptor Ls189884	LR27	418	EKPSSPSSGKGKTEKAE	Homo sapiens
1970	189884	G Protein-Coupled Receptor Ls189884	LR27	419	PSVQDNDPIPWEHEDQETGE	Homo sapiens
1971	189884	G Protein-Coupled Receptor Ls189884	LR27	486	KKPPTVSESQETPAGNSEG	Homo sapiens
1972	189884	G Protein-Coupled Receptor Ls189884	LR27	1832	LVMSEEFREGLKGVWK	Homo sapiens
1973	189884	G Protein-Coupled Receptor Ls189884	LR27	1833	GLPDKVPSPESPASIPEK	Homo sapiens
1974	189884	G Protein-Coupled Receptor Ls189884	LR27	1834	PDVEQFWHERDTVPSVQ	Homo sapiens
1975	189884	G Protein-Coupled Receptor Ls189884	LR27	1835	RHHEGVEMCLVDVPAVAEE	Homo sapiens
1976	189895	G Protein-Coupled Receptor GPR61	AAK12637.1	1685	RVPQTPGPSTASGVPE	Homo sapiens
1977	189895	G Protein-Coupled	AAK12637.1	1686	ETPRQRSESLSSRSTMVTS	Homo sapiens

		Receptor GPR61				
1978	189895	G Protein-Coupled Receptor GPR61	AAK12637.1	1687	SSGAPQTTPHRTFGGGK	Homo sapiens
1979	189895	G Protein-Coupled Receptor GPR61	AAK12637.1	1688	KPAPEEELRLPSREGSIEE	Homo sapiens
1980	189895	G Protein-Coupled Receptor GPR61	AAK12637.1	1689	CPSESWVSRPLPSPKQE	Homo sapiens
1981	189900	Sphingolipid Receptor Edg8	LR1	312	TGKLRGARYQPGAGLRAD	Homo sapiens
1982	189900	Sphingolipid Receptor Edg8	LR1	316	ALERSLTMARRGPAPVSS	Homo sapiens
1983	189900	Sphingolipid Receptor Edg8	LR1	317	DGSFSGSERSSPQRDGLD	Homo sapiens
1984	189900	Sphingolipid Receptor Edg8	LR1	318	CGRDPSGSQQSASAAEASG	Homo sapiens
1985	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	ENSP00000071589	2266	ASRKAEAIGKLKVQGEVS	Homo sapiens
1986	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	ENSP00000071589	2270	SCLSYRVGTKPSASLR	Homo sapiens
1987	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	ENSP00000071589	2271	RVDYYLLHETWRFGAAAC	Homo sapiens
1988	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	ENSP00000071589	2272	HQSRALLGLTRGRQGPVSD	Homo sapiens
1989	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	ENSP00000071589	2273	CIHTRPWTSNTVFLVSL	Homo sapiens
1990	189901	G Protein-Coupled Receptor Ls189901 (HEOAD54)	ENSP00000071589	2274	RGRQGPVSDESSYQPSR	Homo sapiens
1991	189904	Purinergic Receptor P2U2 (GPR91)	AAK29080.1	2108	IDRYLIIKYPFREHLLQKKE	Homo sapiens
1992	189904	Purinergic Receptor P2U2 (GPR91)	AAK29080.1	2109	TDNGTTCNDFASSGDPN	Homo sapiens
1993	189904	Purinergic Receptor P2U2 (GPR91)	AAK29080.1	2110	FLKQRNRQVATALPLE	Homo sapiens
1994	189904	Purinergic Receptor P2U2 (GPR91)	AAK29080.1	2111	RNVRIASRLGSWKQYQC	Homo sapiens
1995	189904	Purinergic Receptor P2U2 (GPR91)	AAK29080.1	2112	GDHFRDMLMNQLRHNFKS	Homo sapiens

1996	189920	G Protein-Coupled Receptor GPR63 (PSP24 beta)	AAK12639.2	1721	CVAFPLAVGNPDLQIPSR	Homo sapiens
1997	189920	G Protein-Coupled Receptor GPR63 (PSP24 beta)	AAK12639.2	1722	NTLRHNALRIHSYPEGIC	Homo sapiens
1998	189920	G Protein-Coupled Receptor GPR63 (PSP24 beta)	AAK12639.2	1723	QASKLGLMSLQRPFQMSID	Homo sapiens
1999	189920	G Protein-Coupled Receptor GPR63 (PSP24 beta)	AAK12639.2	1724	DMMPKSFKFLPQLPGHTKRR	Homo sapiens
2000	189945	G Protein-Coupled Receptor Dj287g14.2	Q9Y3K0	1715	QNLKDPVQIKIKHTRTQE	Homo sapiens
2001	189945	G Protein-Coupled Receptor Dj287g14.2	Q9Y3K0	1716	KNKSFGGWNTSGCVAHRD	Homo sapiens
2002	189945	G Protein-Coupled Receptor Dj287g14.2	Q9Y3K0	1717	RNNNEVYGKESYGKEKGDE	Homo sapiens
2003	189945	G Protein-Coupled Receptor Dj287g14.2	Q9Y3K0	1718	CGRNGKRSNRTLREEVLR	Homo sapiens
2004	189945	G Protein-Coupled Receptor Dj287g14.2	Q9Y3K0	1719	TSKSKSSSTTYFKRNSHTD	Homo sapiens
2005	189945	G Protein-Coupled Receptor Dj287g14.2	Q9Y3K0	1720	DKSLSKLAHADGDQTS	Homo sapiens
2006	190026	G Protein-Coupled Receptor JEG18	LR24	407	LFPLLRTSDDTPGNRTKC	Homo sapiens
2007	190026	G Protein-Coupled Receptor JEG18	LR24	408	QDKYPMAQDLGEKQKALK	Homo sapiens
2008	190026	G Protein-Coupled Receptor JEG18	LR24	409	SFPLDFLVKSNEIKSC	Homo sapiens
2009	190026	G Protein-Coupled Receptor JEG18	LR24	410	RRRLSRQDLHDSIQLHAK	Homo sapiens
2010	190031	G Protein-Coupled Receptor VLGR1	AAD55586.1	1725	KGEAKLDSRAKDVTLTIQE	Homo sapiens
2011	190031	G Protein-Coupled Receptor VLGR1	AAD55586.1	1727	DHKEQPIVTENAERQLVVKD	Homo sapiens
2012	190031	G Protein-Coupled Receptor VLGR1	AAD55586.1	1728	EDFEEQTLTLFLDGERERK	Homo sapiens
2013	190031	G Protein-Coupled	AAD55586.1	1729	EGKEGDYIRIPERLLDVQD	Homo sapiens

		Receptor VLGR1				
2014	190168	G Protein-Coupled Receptor GPR58	AAF27278.1	324	SEAYADGIEGYDILVACSSS	Homo sapiens
2015	190168	G Protein-Coupled Receptor GPR58	AAF27278.1	326	NNLRENQNNQVKKDKKAAK	Homo sapiens
2016	190168	G Protein-Coupled Receptor GPR58	AAF27278.1	379	DPFLNFSTPVVLFDALT	Homo sapiens
2017	190168	G Protein-Coupled Receptor GPR58	AAF27278.1	380	GKIFSSCFHNTILCMQKE	Homo sapiens
2018	190170	G Protein-Coupled Receptor GPR57	AAF27279.1	327	CPKFVNKILSSHQPLFS	Homo sapiens
2019	190170	G Protein-Coupled Receptor GPR57	AAF27279.1	328	KQHARVISHVPENTKGAVKK	Homo sapiens
2020	190170	G Protein-Coupled Receptor GPR57	AAF27279.1	329	ENTKGAVKKHLSKKKDRKA	Homo sapiens
2021	190170	G Protein-Coupled Receptor GPR57	AAF27279.1	330	CKFHTSFDMMLRLTSI	Homo sapiens
2022	190188	G Protein-Coupled Receptor LGR6	LR36	439	ENHDQDLDELQLEMEDSKP	Homo sapiens
2023	190188	G Protein-Coupled Receptor LGR6	LR36	440	NPHFRDDLRRLRPRAGDS	Homo sapiens
2024	190188	G Protein-Coupled Receptor LGR6	LR36	442	EDLHLDDEESSKRPLGLLAR	Homo sapiens
2025	190188	G Protein-Coupled Receptor LGR6	LR36	621	DSGPLAYAAAGELEKSSC	Homo sapiens
2026	190414	G Protein-coupled Receptor GPR101	CAC33098.1	1836	CAARRQHALLYNVKRHSLE	Homo sapiens
2027	190414	G Protein-coupled Receptor GPR101	CAC33098.1	1837	DGSLKAKEGSTGTSESSV	Homo sapiens
2028	190414	G Protein-coupled Receptor GPR101	CAC33098.1	1838	CSIDLGEDGMEFGEDDIN	Homo sapiens
2029	190414	G Protein-coupled Receptor GPR101	CAC33098.1	1839	SEDDVEAVNIPESLPPS	Homo sapiens
2030	190414	G Protein-coupled Receptor GPR101	CAC33098.1	1840	MHKTIKKEIQDMLKKFFC	Homo sapiens
2031	190414	G Protein-coupled Receptor GPR101	CAC33098.1	1841	KEDSHPDLPGTEGGTEG	Homo sapiens
2032	190418	Inflammation-Related G Protein-Coupled Receptor	LR8	343	RQVKRAAQALDQYKLRQAS	Homo sapiens

		EX33				
2033	190418	Inflammation-Related G Protein-Coupled Receptor EX33	LR8	344	RTDEAMPGRFQELDSRLASG	Homo sapiens
2034	190418	Inflammation-Related G Protein-Coupled Receptor EX33	LR8	345	DSSEVGDQINSKRAKQMAEK	Homo sapiens
2035	190418	Inflammation-Related G Protein-Coupled Receptor EX33	LR8	346	KAQPIKGARRAPDSSSEFGK	Homo sapiens
2036	190419	G Protein-Coupled Receptor Ls190419	CAC33085.1	2716	RRKSNFRLRGYSTGKT	Homo sapiens
2037	190419	G Protein-Coupled Receptor Ls190419	CAC33085.1	2717	RRQKSSYNYLLALAAAD	Homo sapiens
2038	190419	G Protein-Coupled Receptor Ls190419	CAC33085.1	2719	CFLTSIPYYWWPNIWT	Homo sapiens
2039	190419	G Protein-Coupled Receptor Ls190419	CAC33085.1	2725	CSIFFILNSIIVYKLR	Homo sapiens
2040	190421	MrgX1 G Protein-Coupled Receptor	AAK91804.1	2754	GRLIYSLLSFISIPH	Homo sapiens
2041	190421	MrgX1 G Protein-Coupled Receptor	AAK91804.1	2755	FFLFLWIHVDRE	Homo sapiens
2042	190421	MrgX1 G Protein-Coupled Receptor	AAK91804.1	2756	MDPTISTLDTELTP	Homo sapiens
2043	190427	Cysteinyl Leukotriene CYSLT2 Receptor	LR49	471	ASSIMLLDSGSEQNGSVTSC	Homo sapiens
2044	190427	Cysteinyl Leukotriene CYSLT2 Receptor	LR49	472	RVLLKVEVPESGLRVSHRK	Homo sapiens
2045	190427	Cysteinyl Leukotriene CYSLT2 Receptor	LR49	473	KDRLKSALRKGHPQKAKTKC	Homo sapiens
2046	190427	Cysteinyl Leukotriene CYSLT2 Receptor	LR49	512	MEPNGTFSNNNSRNC	Homo sapiens
2047	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2253	CTIENFKREFFPIVYLIIF	Homo sapiens
2048	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2254	GVLGNGLSIYVFLQPYK	Homo sapiens
2049	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2255	ADYYLRGSNWIFGDLAC	Homo sapiens
2050	190427	Cysteinyl Leukotriene CYSLT2	NP_065110.1	2256	FRLLHVTSIRSAWILC	Homo sapiens

		Receptor				
2051	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2257	CGIIWILIMASSIMLLDSGS	Homo sapiens
2052	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2258	CLELNLYKIAKLQTMNYIAL	Homo sapiens
2053	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2260	VSHRKALTTIIITLIIFFLC	Homo sapiens
2054	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2261	CFLPYHTLRTVHLTTWKVGL	Homo sapiens
2055	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2262	CKDRLHKALVITLALA	Homo sapiens
2056	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2263	YFAGENFKDRLKSALRKG	Homo sapiens
2057	190427	Cysteinyl Leukotriene CYSLT2 Receptor	NP_065110.1	2264	HPQKAKTKCVFPVSVWLRKE	Homo sapiens
2058	190437	G Protein-Coupled Receptor C5L2	LR31	429	DSVSYEYGDYSDLSDRPVDC	Homo sapiens
2059	190437	G Protein-Coupled Receptor C5L2	LR31	430	RESQGQDESVDSKKSTSHD	Homo sapiens
2060	190437	G Protein-Coupled Receptor C5L2	LR31	431	PSAIYRRLHQEHFPARLQC	Homo sapiens
2061	190437	G Protein-Coupled Receptor C5L2	LR31	432	CHWALRESQGQDESVDSKKS	Homo sapiens
2062	190437	G Protein-Coupled Receptor C5L2	NP_060955.1	2818	MGNDSVSYEYGDYSDLSDRPVDC	Homo sapiens
2063	190438	G Protein-Coupled Receptor Ls190438	ENSP00000080322	2585	TERLKIRWHTSDNQVRPQAC	Homo sapiens
2064	190484	G Protein-Coupled Receptor Ls190484	LR33	434	EADLGATGHRPRTELDDED	Homo sapiens
2065	190484	G Protein-Coupled Receptor Ls190484	LR33	435	RTCHRQQQPAACRGFARVAR	Homo sapiens
2066	190484	G Protein-Coupled Receptor Ls190484	LR33	436	EERPGSFTPTEPQTQLDSEG	Homo sapiens
2067	190484	G Protein-Coupled Receptor Ls190484	LR33	437	RSDPTAQPQLNPTAQPQSD	Homo sapiens
2068	190595	G Protein-Coupled Receptor SH120	NP_057418.1	1730	RNVTDTDILALERRLLQ	Homo sapiens
2069	190595	G Protein-Coupled Receptor SH120	NP_057418.1	1731	KKKRMAMARRTMFQKGE	Homo sapiens

2070	190595	G Protein-Coupled Receptor SH120	NP_057418.1	1732	KSVTTSASGSENLTLIQQE	Homo sapiens
2071	190595	G Protein-Coupled Receptor SH120	NP_057418.1	1733	EVDALEELSRQLFLETAD	Homo sapiens
2072	190595	G Protein-Coupled Receptor SH120	NP_057418.1	1734	DRVGKTDPVTRGIEIT	Homo sapiens
2073	190599	G Protein-Coupled Receptor GPRC5B	O75205	411	VRLPFIKEKEKKSPVGLH	Homo sapiens
2074	190599	G Protein-Coupled Receptor GPRC5B	O75205	412	DEHNAALRTAGFPNGSLGKR	Homo sapiens
2075	190599	G Protein-Coupled Receptor GPRC5B	O75205	413	GKRPSGSLGKRPSAPFRSNV	Homo sapiens
2076	190599	G Protein-Coupled Receptor GPRC5B	O75205	414	SQPRMRETAFEEDVQLPR	Homo sapiens
2077	190602	G Protein-Coupled Receptor GPCR150	CAB55314.1	542	GDPAIYQSLKAQNAYSRHC	Homo sapiens
2078	190602	G Protein-Coupled Receptor GPCR150	CAB55314.1	543	PFSSHSSYTVRSKKIFLSKL	Homo sapiens
2079	190602	G Protein-Coupled Receptor GPCR150	CAB55314.1	619	GKILLNILTLGMRRKNTCQN	Homo sapiens
2080	190602	G Protein-Coupled Receptor GPCR150	CAB55314.1	620	EEVTTLVQAIRITSYMNE	Homo sapiens
2081	190623	Melanopsin	AAF24978.1	2137	CKGNGESLWQRQRLQSE	Homo sapiens
2082	190623	Melanopsin	AAF24978.1	2138	RHSRPYPSYRSTHRST	Homo sapiens
2083	190623	Melanopsin	AAF24978.1	2139	TSHTSNLSWISIRRRQE	Homo sapiens
2084	190623	Melanopsin	AAF24978.1	2140	DLEAKAPPRPQGHEAET	Homo sapiens
2085	190627	G Protein-Coupled Receptor GPR41 & GPR42	NP_005295.1	1735	KLQRRPVAVDVLLLNLTASD	Homo sapiens
2086	190627	G Protein-Coupled Receptor GPR41 & GPR42	NP_005295.1	1736	KTRPRLGQAGLVSVAC	Homo sapiens
2087	190627	G Protein-Coupled Receptor GPR41 & GPR42	NP_005295.1	1737	EFSGDISHSQGTNGTC	Homo sapiens
2088	190627	G Protein-Coupled Receptor GPR41 & GPR42	NP_005295.1	1738	SRLVWILGRGGSHRRQRR	Homo sapiens
2089	190627	G Protein-Coupled Receptor GPR41 & GPR42	NP_005295.1	1739	GQWQQESSMELKEQKGG	Homo sapiens
2090	190627	G Protein-Coupled Receptor GPR41 & GPR42	NP_005295.1	1740	EEQRADRPAERKTSEHSQGC	Homo sapiens
2091	190627	G Protein-Coupled	NP_005295.1	2569	MDTGPDQSYFSGNHWFVFSV	Homo sapiens

		Receptor GPR41 & GPR42				
2092	190701	C-C Chemokine Receptor 11	AAF61299.1	1441	VAIYAYYKKQRTKTDV	Homo sapiens
2093	190701	C-C Chemokine Receptor 11	AAF61299.1	1442	VAVTKVPSQSGVGKPCWII	Homo sapiens
2094	190701	C-C Chemokine Receptor 11	AAF61299.1	1443	CNMSKRMDIAIQVTESI	Homo sapiens
2095	190701	C-C Chemokine Receptor 11	AAF61299.1	1444	RQSVEEFPFDSEGPTEP	Homo sapiens
2096	190705	G Protein-Coupled Receptor SALPR	NP_057652.1	1741	GHPPGSGGAESADTEARVR	Homo sapiens
2097	190705	G Protein-Coupled Receptor SALPR	NP_057652.1	1742	HSVASALKSHRTRGHGRGDC	Homo sapiens
2098	190705	G Protein-Coupled Receptor SALPR	NP_057652.1	1743	KGGAAVAGGRPTGASARR	Homo sapiens
2099	190705	G Protein-Coupled Receptor SALPR	NP_057652.1	1744	CLVRREFRKALKSLLWR	Homo sapiens
2100	190705	G Protein-Coupled Receptor SALPR	NP_057652.1	1745	RPFTATTKPEHEDQGLQ	Homo sapiens
2101	190711	G Protein-Coupled Receptor GPR85 (SREB2)	CAB82307.1	339	AFPPVLDVGTYSFIREEDQC	Homo sapiens
2102	190711	G Protein-Coupled Receptor GPR85 (SREB2)	CAB82307.1	340	HDRRKMKPVQFVAAVSQN	Homo sapiens
2103	190711	G Protein-Coupled Receptor GPR85 (SREB2)	CAB82307.1	341	RRRLLVLDEFKMEKRISR	Homo sapiens
2104	190711	G Protein-Coupled Receptor GPR85 (SREB2)	CAB82307.1	342	LRRCFSTTLLYCRKSRLPRE	Homo sapiens
2105	190725	G Protein-Coupled Receptor GPR26	LR26	554	PLTLAGVVARRQPAGDRLC	Homo sapiens
2106	190725	G Protein-Coupled Receptor GPR26	LR26	555	CSRRPDERLRFAVFTGA	Homo sapiens
2107	190725	G Protein-Coupled Receptor GPR26	LR26	557	CKEILNRLLHRRSIHSSG	Homo sapiens
2108	190725	G Protein-Coupled Receptor GPR26	LR26	567	CLEEQKRRRQRATKKIST	Homo sapiens
2109	190741	Sreb3	LR9	516	EPEEVSGALSPPSASAYVK	Homo sapiens
2110	190741	Sreb3	LR9	519	NGHAASRRLLGMDEVKGEK	Homo sapiens
2111	190741	Sreb3	LR9	526	KKCLRTHAPCWGTGGAPAPR	Homo sapiens
2112	190741	Sreb3	LR9	527	VLMAATHAVYGKLLLFEYR	Homo sapiens

2113	190742	G Protein-Coupled Receptor H7TBA62	LR23	550	RRAPGPPSDTFVFNLALAD	Homo sapiens
2114	190742	G Protein-Coupled Receptor H7TBA62	LR23	551	QRRQRRRQDSRVVARSVR	Homo sapiens
2115	190742	G Protein-Coupled Receptor H7TBA62	LR23	552	RREPRQALAGTFRDLRSR	Homo sapiens
2116	190742	G Protein-Coupled Receptor H7TBA62	LR23	553	KQVGRRWVASNPRESRPS	Homo sapiens
2117	190743	G Protein-Coupled Receptor GPRC5D	LR32	568	KDCIESTGDYFLLCDAEGP	Homo sapiens
2118	190743	G Protein-Coupled Receptor GPRC5D	LR32	569	VENQELSRGTFLGDSGSR	Homo sapiens
2119	190743	G Protein-Coupled Receptor GPRC5D	LR32	570	GDSGSREVLLQEKQEKNHA	Homo sapiens
2120	190743	G Protein-Coupled Receptor GPRC5D	LR32	571	SMLLRGNPQFQRQPQWDDP	Homo sapiens
2121	190744	G Protein-Coupled Receptor GPRC5C	LR34	529	KVPSEELTTSSSHGPPPTAR	Homo sapiens
2122	190744	G Protein-Coupled Receptor GPRC5C	LR34	532	RGSGEGGPQGNSSAGWAV	Homo sapiens
2123	190744	G Protein-Coupled Receptor GPRC5C	LR34	535	QDTKKRSLLGTQVFFLLGT	Homo sapiens
2124	190744	G Protein-Coupled Receptor GPRC5C	LR34	538	KEQKGQSMFVENKAFSMDE	Homo sapiens
2125	190745	G Protein-Coupled Receptor LGR7	LR40	560	TATEIRNQVKKEMILAKR	Homo sapiens
2126	190745	G Protein-Coupled Receptor LGR7	LR40	561	NYRQRKSMDSKGQKTYAPS	Homo sapiens
2127	190745	G Protein-Coupled Receptor LGR7	LR40	565	SCSNLTVLVMRKNKINHLN	Homo sapiens
2128	190745	G Protein-Coupled Receptor LGR7	LR40	566	DELDLGSNKIENLPPLIFKD	Homo sapiens
2129	190748	GPCR Ls190748	LR47	546	QLSSPSRPTQKTLCSLR	Homo sapiens
2130	190748	GPCR Ls190748	LR47	547	DMLKIASMHSQQIRKMEHAG	Homo sapiens
2131	190748	GPCR Ls190748	LR47	548	AGGYRSPRTPSDFKALRTVS	Homo sapiens
2132	190748	GPCR Ls190748	LR47	549	RESSCHIVTISSSEFDG	Homo sapiens
2133	190748	GPCR Ls190748	LR47	1481	GVKKVLTSFLLFLSARNC	Homo sapiens
2134	190748	GPCR Ls190748	LR47	1482	NSLLNPLIYAYWQKEVRLQ	Homo sapiens
2135	190749	G Protein-Coupled	LR48	467	RRAALRPPRPARGSRLRSD	Homo sapiens

		Receptor GPR62				
2136	190749	G Protein-Coupled Receptor GPR62	LR48	468	RPVRLALGRLSRRALPGPVR	Homo sapiens
2137	190749	G Protein-Coupled Receptor GPR62	LR48	510	DSRLSILPPLRPRLPGGK	Homo sapiens
2138	190749	G Protein-Coupled Receptor GPR62	LR48	511	RPPEGPAVGPSEAPEQTPE	Homo sapiens
2139	190749	G Protein-Coupled Receptor GPR62	LR48	2702	VVARRAALRPPRPA	Homo sapiens
2140	190749	G Protein-Coupled Receptor GPR62	LR48	2703	PSEAPEQTPELAGGR	Homo sapiens
2141	190749	G Protein-Coupled Receptor GPR62	LR48	2704	GPSEAPEQTPELAG	Homo sapiens
2142	190774	Histamine H4 Receptor	NP_067637.2	2235	PDTNSTINLSLSTRVTLAFF	Homo sapiens
2143	190774	Histamine H4 Receptor	NP_067637.2	2237	VVDKNLRHRSSYFFLN	Homo sapiens
2144	190774	Histamine H4 Receptor	NP_067637.2	2240	LYIPHTLFEWDFGKEIC	Homo sapiens
2145	190774	Histamine H4 Receptor	NP_067637.2	2242	TQHTGVLKIVTLMVAV	Homo sapiens
2146	190774	Histamine H4 Receptor	NP_067637.2	2243	VNGPMILVSESWKDEGSEC	Homo sapiens
2147	190774	Histamine H4 Receptor	NP_067637.2	2244	CEPGFFSEWYILAITSFL	Homo sapiens
2148	190774	Histamine H4 Receptor	NP_067637.2	2245	AYFNMNIYWSLWKRDHLSRC	Homo sapiens
2149	190774	Histamine H4 Receptor	NP_067637.2	2246	CGHSFRGRLSSRRSLS	Homo sapiens
2150	190774	Histamine H4 Receptor	NP_067637.2	2247	IASKMGSFSQSDSVALHQRE	Homo sapiens
2151	190774	Histamine H4 Receptor	NP_067637.2	2249	IVLSFYSSATGPKSVWYRIA	Homo sapiens
2152	190823	Formyl Peptide Receptor 1 (FPR1)	NP_002020.1	2085	IIRVTTVPGKTGTVAC	Homo sapiens
2153	190823	Formyl Peptide Receptor 1 (FPR1)	NP_002020.1	2086	SPWTNDPKERINVAVA	Homo sapiens
2154	190823	Formyl Peptide Receptor 1 (FPR1)	NP_002020.1	2087	RIRELLQGMYKEIGIAVD	Homo sapiens
2155	190823	Formyl Peptide Receptor 1 (FPR1)	NP_002020.1	2088	TQTSDTATNSTLPSAE	Homo sapiens
2156	190824	Formyl Peptide Receptor-like 2 (FPRL2)	LR14	481	TEVPDSAQTSNTHTTSAS	Homo sapiens
2157	190824	Formyl Peptide Receptor-like 2 (FPRL2)	LR14	522	GDTAVERLNVFITMAKV	Homo sapiens
2158	190824	Formyl Peptide Receptor-like 2 (FPRL2)	LR14	523	MSLAKRVMTGLWIFTI	Homo sapiens
2159	190824	Formyl Peptide Receptor-	LR14	525	LHFIIGFTVPMSIITV	Homo sapiens

		like 2 (FPRL2)				
2160	190948	EMR2 Hormone Receptor	NP_038475.1	1658	DELLEAPGDLETLPRLQQHC	Homo sapiens
2161	190948	EMR2 Hormone Receptor	NP_038475.1	1659	CVASHLLDGLEDVLRGLSKN	Homo sapiens
2162	190948	EMR2 Hormone Receptor	NP_038475.1	1660	KSGDPGPSVVGLVSIPG	Homo sapiens
2163	190948	EMR2 Hormone Receptor	NP_038475.1	1661	SKGIRKLKTESEMHTLSSS	Homo sapiens
2164	190948	EMR2 Hormone Receptor	NP_038475.1	1662	ELSLEVQKQVDRSVTLRQNQ	Homo sapiens
2165	190948	EMR2 Hormone Receptor	NP_038475.1	1663	EPEKQMLLHETHQGLLQDGS	Homo sapiens
2166	190955	Leukotriene B4 Receptor BLT1	NP_000743.1	1492	KRMQKRSVTALMVLNLALAD	Homo sapiens
2167	190955	Leukotriene B4 Receptor BLT1	NP_000743.1	1493	RPFVSQKLRTKAMARR	Homo sapiens
2168	190955	Leukotriene B4 Receptor BLT1	NP_000743.1	1494	ASYSDIGRRLQARRFR	Homo sapiens
2169	190955	Leukotriene B4 Receptor BLT1	NP_000743.1	1495	LEGTGSEASSTRRGGS	Homo sapiens
2170	191039	Trace Amine Receptor 1 (TA1)	LR122	2039	RKALKMMLFGKIFQKDSSRC	Homo sapiens
2171	191039	Trace Amine Receptor 1 (TA1)	LR122	2040	QIGLEMKNGISQSKERKAV	Homo sapiens
2172	191039	Trace Amine Receptor 1 (TA1)	LR122	2041	RIYLIAKEQARLISDANQK	Homo sapiens
2173	191039	Trace Amine Receptor 1 (TA1)	LR122	2042	ELNFKGAEEIYYKHVHC	Homo sapiens
2174	191039	Trace Amine Receptor 1 (TA1)	LR122	2043	CVKNNWSNDVRASLYS	Homo sapiens
2175	191132	G Protein-Coupled Receptor 88 (GPR88)	NP_071332.1	1569	SAEPPADWDGAGGSYRLLRG	Homo sapiens
2176	191132	G Protein-Coupled Receptor 88 (GPR88)	NP_071332.1	1571	GIVRRVRVSVKRVSVLN	Homo sapiens
2177	191132	G Protein-Coupled Receptor 88 (GPR88)	NP_071332.1	1572	RNEEFRRSVRSVLPGVGDA	Homo sapiens
2178	191132	G Protein-Coupled Receptor 88 (GPR88)	NP_071332.1	1573	CEEEESWAGRRIPVSLLYSG	Homo sapiens
2179	191132	G Protein-Coupled Receptor 88 (GPR88)	NP_071332.1	1651	CYLGIVRRVRVSVKRVS	Homo sapiens
2180	191168	P2Y12 Platelet ADP Receptor	NP_073625.1	1544	KELYRSYVRTRGVGKVPR	Homo sapiens
2181	191168	P2Y12 Platelet ADP Receptor	NP_073625.1	1545	ILTNRQPRDKNVKKCS	Homo sapiens

2182	191168	P2Y12 Platelet ADP Receptor	NP_073625.1	1546	CPNSATSLSQDNRKKEQDGG	Homo sapiens
2183	191168	P2Y12 Platelet ADP Receptor	NP_073625.1	1570	TTRPFKTSNPKNLLGAK	Homo sapiens
2184	191193	Trace Amine Receptor 3 (TA3)	LR88	1969	ANEEGIEELVVA	Homo sapiens
2185	191193	Trace Amine Receptor 3 (TA3)	LR88	2316	RKIESTASQAQSS	Homo sapiens
2186	191193	Trace Amine Receptor 3 (TA3)	LR88	2571	LVDAVIDAYMNFI	Homo sapiens
2187	191193	Trace Amine Receptor 3 (TA3)	LR88	2573	RTDSSTTNLFSEEVET	Homo sapiens
2188	191196	G Protein-Coupled Receptor GPR80	IP_13092	1864	NASDFPDYAAAFGNCTDE	Homo sapiens
2189	191196	G Protein-Coupled Receptor GPR80	IP_13092	1865	TFLITSTNRTNRSACLD	Homo sapiens
2190	191196	G Protein-Coupled Receptor GPR80	IP_13092	1866	TLTHGLQTDSCLKQKARR	Homo sapiens
2191	191196	G Protein-Coupled Receptor GPR80	IP_13092	1867	RLLSISCSIENQIHEA	Homo sapiens
2192	191196	G Protein-Coupled Receptor GPR80	IP_13092	1868	QQAVCSTVRCKVSGNLE	Homo sapiens
2193	191218	MrgX2 G Protein-Coupled Receptor	AAK91805.1	2749	QDIAEVDHSEGCF	Homo sapiens
2194	191218	MrgX2 G Protein-Coupled Receptor	AAK91805.1	2750	RKQWRLQQPILKLA	Homo sapiens
2195	191218	MrgX2 G Protein-Coupled Receptor	AAK91805.1	2751	CSISINFPSFFTTVMTC	Homo sapiens
2196	191218	MrgX2 G Protein-Coupled Receptor	AAK91805.1	2752	QWFLILWIWKDSDV	Homo sapiens
2197	191222	G Protein-Coupled Receptor Ls191222	ENSP00000199719	2575	AFLSDNTIEVRINRTLKK	Homo sapiens
2198	191222	G Protein-Coupled Receptor Ls191222	ENSP00000199719	2576	QETKNEFRNLKQIQSKC	Homo sapiens
2199	191222	G Protein-Coupled Receptor Ls191222	ENSP00000199719	2577	CNNKTHWAPVRSTM	Homo sapiens
2200	191222	G Protein-Coupled Receptor Ls191222	ENSP00000199719	2581	TKMAEYDLQNDVFIIPD	Homo sapiens
2201	193511	EGF-Like Module-Containing	AAK15076.1	1665	CQDTTSSKTTEGRKELQKIV	Homo sapiens

		Mucin-Like Receptor EMR3				
2202	193511	EGF-Like Module-Containing Mucin-Like Receptor EMR3	AAK15076.1	1666	RDVESKVLETALKDPEQK	Homo sapiens
2203	193511	EGF-Like Module-Containing Mucin-Like Receptor EMR3	AAK15076.1	1667	KIQNDSVAIETQAITDNC	Homo sapiens
2204	193511	EGF-Like Module-Containing Mucin-Like Receptor EMR3	AAK15076.1	1668	CSEERKTFNLNVQMNSMDIR	Homo sapiens
2205	193511	EGF-Like Module-Containing Mucin-Like Receptor EMR3	AAK15076.1	1669	EEMDKKDQVYLNSQVVSAA	Homo sapiens
2206	193511	EGF-Like Module-Containing Mucin-Like Receptor EMR3	AAK15076.1	1670	SKSVTLTFQHVKMTPSTK	Homo sapiens
2207	193516	G Protein-Coupled Receptor dJ402H5.1	CAC21687.1	2142	CLLLPTAVIVFSYVKIIAK	Homo sapiens
2208	193516	G Protein-Coupled Receptor dJ402H5.1	CAC21687.1	2144	RPDSIPIQLSVVPTLLA	Homo sapiens
2209	193516	G Protein-Coupled Receptor dJ402H5.1	CAC21687.1	2145	CQTGGLKATKKKSLEG	Homo sapiens
2210	193516	G Protein-Coupled Receptor dJ402H5.1	CAC21687.1	2146	RLHTVTTVRKSSAVLE	Homo sapiens
2211	193516	G Protein-Coupled Receptor dJ402H5.1	CAC21687.1	2620	PTAVIVFSYVKIIAKV	Homo sapiens
2212	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	1947	KLAQRLREVTGHTDHYFSQD	Homo sapiens
2213	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	1948	CALQTWGSERRLGLDTSKD	Homo sapiens
2214	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	2734	RGRRQSARNSRGPPEQPNE	Homo sapiens
2215	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	2735	RNSRGPPEQPNEELG	Homo sapiens
2216	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	2736	AQVREDVRPHTVVLR	Homo sapiens
2217	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	2742	QLDQVPSRHPSRE	Homo sapiens

2218	193524	Cadherin EGF LAG Seven-Pass G-Type Receptor 3 (CELSR3)	NP_001398.1	2744	LDSLSRSSNSREQLDQV	Homo sapiens
2219	193914	Neuropeptide FF 1 Receptor	NP_071429.1	1903	REEHHFMVDARNRSYPLYSC	Homo sapiens
2220	193914	Neuropeptide FF 1 Receptor	NP_071429.1	1904	PGPAPGGEEAADPRASRR	Homo sapiens
2221	193914	Neuropeptide FF 1 Receptor	NP_071429.1	1905	CPRPSGSHKEAYSERPGGLL	Homo sapiens
2222	193914	Neuropeptide FF 1 Receptor	NP_071429.1	1906	PSSGAPRPGRLPLRNGRVA	Homo sapiens
2223	194319	G Protein-Coupled Receptor FLJ22684	NP_079324.1	2018	FLGKNDDIKTKKELIVN	Homo sapiens
2224	194319	G Protein-Coupled Receptor FLJ22684	NP_079324.1	2019	QVTYRDSKEKRDLRNFLK	Homo sapiens
2225	194319	G Protein-Coupled Receptor FLJ22684	NP_079324.1	2020	CERTKIWGTFKINERFTND	Homo sapiens
2226	194319	G Protein-Coupled Receptor FLJ22684	NP_079324.1	2021	SKYANGIEIQLKKAYER	Homo sapiens
2227	194431	Olfactory Receptor, Family 51, Subfamily E, Member 2	NP_110401.1	2022	CIVVFIVRTERSLHAP	Homo sapiens
2228	194431	Olfactory Receptor, Family 51, Subfamily E, Member 2	NP_110401.1	2023	KILALFWFDSREISFEAC	Homo sapiens
2229	194431	Olfactory Receptor, Family 51, Subfamily E, Member 2	NP_110401.1	2024	CVHQDVMKLAYADTLP	Homo sapiens
2230	194431	Olfactory Receptor, Family 51, Subfamily E, Member 2	NP_110401.1	2027	RFGNSLHPIVRVVMGD	Homo sapiens
2231	194431	Olfactory Receptor, Family 51, Subfamily E, Member 2	NP_110401.1	2028	KTKQIRTRVLAMFKISC	Homo sapiens
2232	194743	FLJ14454	LR77	1855	KTDENEQDQSASVDMVFSP	Homo sapiens
2233	194743	FLJ14454	LR77	1856	KKDYQYPKSLDILSNVGC	Homo sapiens
2234	194743	FLJ14454	LR77	1857	KNLQTSDGDINNIDFDNN	Homo sapiens
2235	194743	FLJ14454	LR77	1858	SQNGNNPQWELDYRQEKIC	Homo sapiens
2236	194743	FLJ14454	LR77	1859	RPRLRVKMYNFLRSLPTLHE	Homo sapiens
2237	194745	G Protein-Coupled Receptor SLT/MCH2	AAK32193.1	1845	CNPSVPKQRVMKLTKM	Homo sapiens
2238	194745	G Protein-Coupled Receptor SLT/MCH2	AAK32193.1	1846	RLTRWRTRYKTIRINLG	Homo sapiens
2239	194745	G Protein-Coupled Receptor SLT/MCH2	AAK32193.1	1847	KDGVESCAFDLTSPDDVL	Homo sapiens
2240	194745	G Protein-Coupled Receptor SLT/MCH2	AAK32193.1	1848	LSGNFQKRLPQIQRRATE	Homo sapiens

2241	194745	G Protein-Coupled Receptor SLT/MCH2	AAK32193.1	1849	TIIRSRKKTVPDIYIC	Homo sapiens
2242	194745	G Protein-Coupled Receptor SLT/MCH2	AAK32193.1	1907	RRATEKEINNMGNTLKSHF	Homo sapiens
2243	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2089	CRIEGDTISQVMPPLLIVA	Homo sapiens
2244	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2090	RRHWAFGDIPCRVGLFTL	Homo sapiens
2245	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2091	CESFIMESANGWHDIM	Homo sapiens
2246	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2092	CSFKIVWSLRRRQQLARQAR	Homo sapiens
2247	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2093	RRRQQLARQARMKKATR	Homo sapiens
2248	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2094	TVPSSACDPSVHGALH	Homo sapiens
2249	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2095	CSLKPKQPGHSKTQRPEEM	Homo sapiens
2250	194756	Chemokine Receptor FKSG80/GPR81	AAK29071.1	2096	CISVANSFQSQSDGQWD	Homo sapiens
2251	194757	G Protein-Coupled Receptor Ls194757	CAB82385.1	2034	RTRKQHSEATNSSNRVFVYC	Homo sapiens
2252	194757	G Protein-Coupled Receptor Ls194757	CAB82385.1	2035	RVISQISADNYKIHGDPSA	Homo sapiens
2253	194757	G Protein-Coupled Receptor Ls194757	CAB82385.1	2036	TSSSARTSNAKPFHSD	Homo sapiens
2254	194757	G Protein-Coupled Receptor Ls194757	CAB82385.1	2037	NGTRPGMASTKLSPWD	Homo sapiens
2255	194858	G Protein-Coupled Receptor LS194858	LR84	1933	LGIAWDRRLRSPPAGC	Homo sapiens
2256	194858	G Protein-Coupled Receptor LS194858	LR84	1934	GERYMAVLRPLQPPGS	Homo sapiens
2257	194858	G Protein-Coupled Receptor LS194858	LR84	1935	CRDEPSALARALTWRQAR	Homo sapiens
2258	194858	G Protein-Coupled Receptor LS194858	LR84	1936	AAQRCLQGLWGRASRD	Homo sapiens
2259	194858	G Protein-Coupled Receptor LS194858	LR84	1937	RDSPGPSIAYHPSSQSSVD	Homo sapiens
2260	194878	MrgX3 G Protein-Coupled	AAK91806.1	2748	ALFSRIHLDWKVLF	Homo sapiens

		Receptor				
2261	194903	G Protein-Coupled Receptor GPCRB3	ENSP00000198236	1991	CIAFKDIMPFSAQVGDER	Homo sapiens
2262	194903	G Protein-Coupled Receptor GPCRB3	ENSP00000198236	1992	KAFEEAYARADKKAPRPC	Homo sapiens
2263	194903	G Protein-Coupled Receptor GPCRB3	ENSP00000198236	1993	ETKIQWHGKDNQVPKSVC	Homo sapiens
2264	194903	G Protein-Coupled Receptor GPCRB3	ENSP00000198236	1994	CSYLGKDLPENYNEAK	Homo sapiens
2265	194904	WO0034334-hFB41A	LR114	2011	SDYDMPLDEDEDVTNS	Homo sapiens
2266	194904	WO0034334-hFB41A	LR114	2014	NPHGAHATSFPFNFSY	Homo sapiens
2267	194905	G Protein-Coupled Receptor MGC7035	LR112	1986	ERALPRTYMASVYNTRHVC	Homo sapiens
2268	194905	G Protein-Coupled Receptor MGC7035	LR112	1987	CAKMQNAEAADATLVF	Homo sapiens
2269	194905	G Protein-Coupled Receptor MGC7035	LR112	1988	DRDTGRLEPSAHRLLVATVC	Homo sapiens
2270	194905	G Protein-Coupled Receptor MGC7035	LR112	1989	RYMNQSFPSKLQRLMKKLPC	Homo sapiens
2271	194907	G Protein-Coupled Receptor 14273	LR116	2003	CARAAGDAPLRSLEQANRTR	Homo sapiens
2272	194907	G Protein-Coupled Receptor 14273	LR116	2004	VISYSKILQTTKASRKRL	Homo sapiens
2273	194907	G Protein-Coupled Receptor 14273	LR116	2005	TVSLAYSRSHQIRVSQQD	Homo sapiens
2274	194907	G Protein-Coupled Receptor 14273	LR116	2006	CTWFPEKGAILTDTSVKRND	Homo sapiens
2275	194908	G Protein-coupled Receptor Gpcrb4	LR117	2007	TYGRDNGQLLGERVARRDIC	Homo sapiens
2276	194908	G Protein-coupled Receptor Gpcrb4	LR117	2008	QETLPTLQPNQNMTSEERQR	Homo sapiens
2277	194908	G Protein-coupled Receptor Gpcrb4	LR117	2009	RTSQSYTCNQECDNCLNAT	Homo sapiens
2278	194908	G Protein-coupled Receptor Gpcrb4	LR117	2010	RPQSHPRTDPDDPKITIVSC	Homo sapiens
2279	194957	Trace Amine Receptor 4 (TA4)	AAK71243.1	2312	VARRQAKKIENTGSKT	Homo sapiens
2280	194957	Trace Amine Receptor 4 (TA4)	AAK71243.1	2313	KVIVTGQVLKNSSA	Homo sapiens

2281	194957	Trace Amine Receptor 4 (TA4)	AAK71243.1	2318	MSSNSSLLVAVQLC	Homo sapiens
2282	194958	Trace Amine Receptor 5 (TA5)	AAK71244.1	2307	IAKQQAIKIETTSSKV	Homo sapiens
2283	194958	Trace Amine Receptor 5 (TA5)	AAK71244.1	2314	MTSNFSQPVVQLC	Homo sapiens
2284	194958	Trace Amine Receptor 5 (TA5)	AAK71244.1	2319	KLILSGDVLKAS	Homo sapiens
2285	194958	Trace Amine Receptor 5 (TA5)	AAK71244.1	2570	SGDVLKASSSTISLFLE	Homo sapiens
2286	194989	MrgX4 G Protein-Coupled Receptor	AAK91807.1	2727	QDKPEVDKGEGQLPEESL	Homo sapiens
2287	194989	MrgX4 G Protein-Coupled Receptor	AAK91807.1	2728	LINISHLIRKILVS	Homo sapiens
2288	194989	MrgX4 G Protein-Coupled Receptor	AAK91807.1	2729	MDPTVPVFGTKL	Homo sapiens
2289	195015	G Protein-Coupled Receptor GPR82	AAL26482	2706	RYATLMQKDSSQETT	Homo sapiens
2290	195015	G Protein-Coupled Receptor GPR82	AAL26482	2707	KIFYGHLLKKFRQPNF	Homo sapiens
2291	195015	G Protein-Coupled Receptor GPR82	AAL26482	2708	YSVIEATEGEESLC	Homo sapiens
2292	195015	G Protein-Coupled Receptor GPR82	AAL26482	2715	CTSIMEKDLTYSSVKR	Homo sapiens

SEQ ID NO:	LS_ID	Gene	Antibody Company Name
1	127	5-HT1A Receptor	Chemicon
1	127	5-HT1A Receptor	Research Diagnostics
1	127	5-HT1A Receptor	Santa Cruz
3	128	5-HT1B Receptor	Chemicon
3	128	5-HT1B Receptor	Research Diagnostics
3	128	5-HT1B Receptor	Santa Cruz
5	129	5-HT1D Receptor	Research Diagnostics
5	129	5-HT1D Receptor	Santa Cruz
11	132	5-HT2A Receptor	Calbiochem
11	132	5-HT2A Receptor	Research Diagnostics
13	133	5-HT2B Receptor	Research Diagnostics
15	134	5-HT2C Receptor	Research Diagnostics
15	134	5-HT2C Receptor	Santa Cruz
21	139	5-HT7 Receptor	Calbiochem
23	272	Adenosine A1 Receptor	Alpha Diagnostic Int.
23	272	Adenosine A1 Receptor	Calbiochem
23	272	Adenosine A1 Receptor	Santa Cruz
25	273	Adenosine A2a Receptor	Alpha Diagnostic Int.
25	273	Adenosine A2a Receptor	Calbiochem
25	273	Adenosine A2a Receptor	Chemicon
25	273	Adenosine A2a Receptor	Santa Cruz
27	274	Adenosine A2b Receptor	Alpha Diagnostic Int.
27	274	Adenosine A2b Receptor	Chemicon
27	274	Adenosine A2b Receptor	Santa Cruz
29	275	Adenosine A3 Receptor	Alpha Diagnostic Int.
29	275	Adenosine A3 Receptor	Santa Cruz
31	309	Melanocortin 2 Receptor (adrenocorticotropic hormone) (MC2R)	Alpha Diagnostic Int.
31	309	Melanocortin 2 Receptor (adrenocorticotropic hormone) (MC2R)	Chemicon
31	309	Melanocortin 2 Receptor (adrenocorticotropic hormone) (MC2R)	Research Diagnostics
31	309	Melanocortin 2 Receptor (adrenocorticotropic hormone) (MC2R)	Santa Cruz
35	377	Alpha 1b-adrenoceptor	Research Diagnostics
35	377	Alpha 1b-adrenoceptor	Santa Cruz
37	379	Alpha 1c-adrenoceptor	Research Diagnostics
37	379	Alpha 1c-adrenoceptor	Santa Cruz
39	387	Alpha 2a-adrenoceptor	Calbiochem
39	387	Alpha 2a-adrenoceptor	Santa Cruz
41	388	Alpha 2b-adrenoceptor	Research Diagnostics
41	388	Alpha 2b-adrenoceptor	Santa Cruz
43	389	Alpha 2c-adrenoceptor	Research Diagnostics
43	389	Alpha 2c-adrenoceptor	Santa Cruz
45	599	Bradykinin B1 Receptor	Research Diagnostics
49	635	Beta-1 adrenoceptor	Calbiochem
49	635	Beta-1 adrenoceptor	Research Diagnostics

49	635	Beta-1 adrenoceptor	Santa Cruz
51	640	Beta-2 adrenoceptor	Research Diagnostics
51	640	Beta-2 adrenoceptor	Santa Cruz
53	643	Beta-3 adrenoceptor	Alpha Diagnostic Int.
53	643	Beta-3 adrenoceptor	Chemicon
53	643	Beta-3 adrenoceptor	Research Diagnostics
53	643	Beta-3 adrenoceptor	Santa Cruz
57	692	Bombesin Receptor Subtype-3	Alpha Diagnostic Int.
57	692	Bombesin Receptor Subtype-3	Chemicon
59	729	CXC Chemokine Receptor 5	Research Diagnostics
59	729	CXC Chemokine Receptor 5	Santa Cruz
61	735	C-C Chemokine Receptor 1	Calbiochem
61	735	C-C Chemokine Receptor 1	Capralogics
61	735	C-C Chemokine Receptor 1	Chemicon
61	735	C-C Chemokine Receptor 1	Research Diagnostics
61	735	C-C Chemokine Receptor 1	Santa Cruz
63	737	C-C Chemokine Receptor 3	Research Diagnostics
63	737	C-C Chemokine Receptor 3	Santa Cruz
65	738	C-C Chemokine Receptor 4	Capralogics
65	738	C-C Chemokine Receptor 4	Research Diagnostics
65	738	C-C Chemokine Receptor 4	Santa Cruz
67	741	C-C Chemokine Receptor 7	Research Diagnostics
67	741	C-C Chemokine Receptor 7	Santa Cruz
69	742	C-C Chemokine Receptor 8	Chemicon
70	742	C-C Chemokine Receptor 8	Chemicon
71	742	C-C Chemokine Receptor 8	Chemicon
73	752	CXC Chemokine Receptor 3	Research Diagnostics
73	752	CXC Chemokine Receptor 3	Santa Cruz
73	752	CXC Chemokine Receptor 3	Zymed
75	753	CXC Chemokine Receptor 4	Biosource
75	753	CXC Chemokine Receptor 4	Calbiochem
75	753	CXC Chemokine Receptor 4	Capralogics
75	753	CXC Chemokine Receptor 4	Chemicon
75	753	CXC Chemokine Receptor 4	eBioscience
75	753	CXC Chemokine Receptor 4	Research Diagnostics
75	753	CXC Chemokine Receptor 4	Santa Cruz
77	755	Complement Component 3a Receptor 1	Chemokine.com
79	758	Complement Component 5a Receptor 1	Santa Cruz
83	832	Cannabinoid Receptor 1	Alpha Diagnostic Int.
83	832	Cannabinoid Receptor 1	Biosource
83	832	Cannabinoid Receptor 1	Calbiochem
83	832	Cannabinoid Receptor 1	Cayman
83	832	Cannabinoid Receptor 1	Chemicon
83	832	Cannabinoid Receptor 1	Santa Cruz
85	833	Cannabinoid Receptor 2	Alpha Diagnostic Int.
85	833	Cannabinoid Receptor 2	Calbiochem
85	833	Cannabinoid Receptor 2	Cayman
85	833	Cannabinoid Receptor 2	Chemicon
85	833	Cannabinoid Receptor 2	Santa Cruz
97	1240	Dopamine Receptor D1	Alpha Diagnostic Int.
97	1240	Dopamine Receptor D1	Biogenesis

97	1240	Dopamine Receptor D1	Calbiochem
97	1240	Dopamine Receptor D1	Chemicon
97	1240	Dopamine Receptor D1	FabGennix through Abcam
97	1240	Dopamine Receptor D1	Research Diagnostics
97	1240	Dopamine Receptor D1	Santa Cruz
99	1241	Dopamine Receptor D5	Alpha Diagnostic Int.
99	1241	Dopamine Receptor D5	Biogenesis
99	1241	Dopamine Receptor D5	Calbiochem
99	1241	Dopamine Receptor D5	Chemicon
99	1241	Dopamine Receptor D5	Santa Cruz
101	1242	Dopamine Receptor D2	Alpha Diagnostic Int.
101	1242	Dopamine Receptor D2	Biogenesis
101	1242	Dopamine Receptor D2	Calbiochem
101	1242	Dopamine Receptor D2	Chemicon
101	1242	Dopamine Receptor D2	DPC Biermann/Acris
101	1242	Dopamine Receptor D2	FabGennix through Abcam
101	1242	Dopamine Receptor D2	Research Diagnostics
101	1242	Dopamine Receptor D2	Santa Cruz
103	1243	Dopamine Receptor D3	Alpha Diagnostic Int.
103	1243	Dopamine Receptor D3	Biogenesis
103	1243	Dopamine Receptor D3	Calbiochem
103	1243	Dopamine Receptor D3	Chemicon
103	1243	Dopamine Receptor D3	Research Diagnostics
103	1243	Dopamine Receptor D3	Santa Cruz
103	1243	Dopamine Receptor D3	Zymed
105	1244	Dopamine Receptor D4	Alpha Diagnostic Int.
105	1244	Dopamine Receptor D4	Biogenesis
105	1244	Dopamine Receptor D4	Calbiochem
105	1244	Dopamine Receptor D4	Chemicon
105	1244	Dopamine Receptor D4	DPC Biermann/Acris
105	1244	Dopamine Receptor D4	Santa Cruz
107	1267	Opioid Receptor, delta 1 (OPRD1)	Biosource
107	1267	Opioid Receptor, delta 1 (OPRD1)	Calbiochem
107	1267	Opioid Receptor, delta 1 (OPRD1)	DPC Biermann/Acris
107	1267	Opioid Receptor, delta 1 (OPRD1)	Santa Cruz
113	1486	Endothelin B Receptor	Biogenesis
113	1486	Endothelin B Receptor	Capralogics
113	1486	Endothelin B Receptor	DPC Biermann/Acris
113	1486	Endothelin B Receptor	Fitgerald Industries Int.
113	1486	Endothelin B Receptor	Research Diagnostics
115	1488	Endothelin A Receptor	Biogenesis
115	1488	Endothelin A Receptor	Capralogics
115	1488	Endothelin A Receptor	DPC Biermann/Acris
115	1488	Endothelin A Receptor	Fitgerald Industries Int.
115	1488	Endothelin A Receptor	Research Diagnostics
117	1598	Calcium-Sensing Receptor (CASR)	Chemicon
117	1598	Calcium-Sensing Receptor (CASR)	DPC Biermann/Acris

121	1681	Follicle Stimulating Hormone Receptor	Biogenesis
121	1681	Follicle Stimulating Hormone Receptor	DPC Biermann/Acris
121	1681	Follicle Stimulating Hormone Receptor	Santa Cruz
125	1762	Galanin Receptor GalR1	Alpha Diagnostic Int.
135	1925	Gonadotropin-Releasing Hormone Receptor	Biocarta
135	1925	Gonadotropin-Releasing Hormone Receptor	Lab Vision Corporation/NeoMarkers
135	1925	Gonadotropin-Releasing Hormone Receptor	Research Diagnostics
135	1925	Gonadotropin-Releasing Hormone Receptor	Santa Cruz
139	1951	Growth Hormone Secretagogue Receptor	Santa Cruz
143	2120	Histamine H1 Receptor	Alpha Diagnostic Int.
143	2120	Histamine H1 Receptor	Chemicon
145	2121	Histamine H2 Receptor	Alpha Diagnostic Int.
145	2121	Histamine H2 Receptor	Chemicon
147	2783	Opioid Receptor, kappa 1 (OPRK1)	Biosource
147	2783	Opioid Receptor, kappa 1 (OPRK1)	Calbiochem
147	2783	Opioid Receptor, kappa 1 (OPRK1)	DPC Biermann/Acris
147	2783	Opioid Receptor, kappa 1 (OPRK1)	Santa Cruz
151	2976	Lysophosphatidic Acid Receptor Edg2	Exalpha Biologicals
155	3057	Melanocortin 3 Receptor (MC3R)	Alpha Diagnostic Int.
155	3057	Melanocortin 3 Receptor (MC3R)	Chemicon
155	3057	Melanocortin 3 Receptor (MC3R)	Research Diagnostics
155	3057	Melanocortin 3 Receptor (MC3R)	Santa Cruz
157	3058	Melanocortin 4 Receptor (MC4R)	Alpha Diagnostic Int.
157	3058	Melanocortin 4 Receptor (MC4R)	Chemicon
157	3058	Melanocortin 4 Receptor (MC4R)	Research Diagnostics
157	3058	Melanocortin 4 Receptor (MC4R)	Santa Cruz
159	3059	Melanocortin 5 Receptor (MC5R)	Alpha Diagnostic Int.
159	3059	Melanocortin 5 Receptor (MC5R)	Chemicon
159	3059	Melanocortin 5 Receptor (MC5R)	Research Diagnostics

159	3059	Melanocortin 5 Receptor (MC5R)	Santa Cruz
161	3061	Melanocortin 1 Receptor (MC1R)	Alpha Diagnostic Int.
161	3061	Melanocortin 1 Receptor (MC1R)	Chemicon
161	3061	Melanocortin 1 Receptor (MC1R)	Research Diagnostics
161	3061	Melanocortin 1 Receptor (MC1R)	Santa Cruz
169	3093	Metabotropic Glutamate Receptor 1	Chemicon
171	3094	Metabotropic Glutamate Receptor 2	Chemicon
173	3095	Metabotropic Glutamate Receptor 3	Chemicon
175	3096	Metabotropic Glutamate Receptor 4	Zymed
177	3097	Metabotropic Glutamate Receptor 5	Chemicon
183	3100	Metabotropic Glutamate Receptor 8	Chemicon
185	3212	Opioid mu-type Receptor	Biosource
185	3212	Opioid mu-type Receptor	Calbiochem
185	3212	Opioid mu-type Receptor	Chemicon
185	3212	Opioid mu-type Receptor	DPC Biermann/Acris
185	3212	Opioid mu-type Receptor	Santa Cruz
187	3223	Muscarinic acetylcholine Receptor M1	Biogenesis
187	3223	Muscarinic acetylcholine Receptor M1	Calbiochem
187	3223	Muscarinic acetylcholine Receptor M1	Chemicon
187	3223	Muscarinic acetylcholine Receptor M1	Santa Cruz
189	3224	Muscarinic acetylcholine Receptor M2	Biogenesis
189	3224	Muscarinic acetylcholine Receptor M2	Calbiochem
189	3224	Muscarinic acetylcholine Receptor M2	Chemicon
189	3224	Muscarinic acetylcholine Receptor M2	Santa Cruz
191	3226	Muscarinic acetylcholine Receptor M4	Biogenesis
192	3226	Muscarinic acetylcholine Receptor M4	Biogenesis
191	3226	Muscarinic acetylcholine Receptor M4	Chemicon
192	3226	Muscarinic acetylcholine Receptor M4	Chemicon
191	3226	Muscarinic acetylcholine Receptor M4	Santa Cruz

192	3226	Muscarinic acetylcholine Receptor M4	Santa Cruz
194	3227	Muscarinic Acetylcholine Receptor M5	Biogenesis
194	3227	Muscarinic Acetylcholine Receptor M5	Santa Cruz
200	3404	Neuropeptide Y Receptor Type 2	Biogenesis
202	3405	Neuropeptide Y Receptor Type 4	Biogenesis
206	3408	Neurotensin Receptor Type 1	Santa Cruz
208	3452	Opiate Receptor-Like 1 (OPRL1)	Santa Cruz
214	3582	Oxytocin Receptor	Santa Cruz
216	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	Chemicon
216	3589	Purinergic Receptor P2Y, G-protein coupled, 2 (P2RY2)	Zymed
218	3595	Purinergic Receptor P2Y1	Chemicon
218	3595	Purinergic Receptor P2Y1	Zymed
228	3640	Parathyroid Hormone Receptor 1 (PTHR1)	Biocarta
228	3640	Parathyroid Hormone Receptor 1 (PTHR1)	Lab Vision Corporation/NeoMarkers
228	3640	Parathyroid Hormone Receptor 1 (PTHR1)	Santa Cruz
236	3846	Sphingolipid Receptor Edg1	Exalpha Biologicals
238	3847	Sphingolipid Receptor Edg3	Exalpha Biologicals
240	3848	C-C Chemokine Receptor 9	Research Diagnostics
248	3852	CX3C Chemokine Fractalkine Receptor 1	Chemicon
248	3852	CX3C Chemokine Fractalkine Receptor 1	Chemokine.com
248	3852	CX3C Chemokine Fractalkine Receptor 1	eBioscience
250	3853	G Protein-Coupled Receptor GPR15	Santa Cruz
264	3860	G Protein-Coupled Receptor SLC/MCH1	Alpha Diagnostic Int.
264	3860	G Protein-Coupled Receptor SLC/MCH1	Santa Cruz
295	3927	Prostaglandin E Receptor EP4	Cayman
299	4051	Proteinase-Activated Receptor 2	Research Diagnostics
299	4051	Proteinase-Activated Receptor 2	Santa Cruz
301	4052	Proteinase-Activated Receptor 3	Research Diagnostics
301	4052	Proteinase-Activated Receptor 3	Santa Cruz
305	4254	Rhodopsin	Biocarta
305	4254	Rhodopsin	DPC Biermann/Acris
311	4480	Somatostatin Receptor Type 1	Santa Cruz

313	4481	Somatostatin Receptor Type 2	Biogenesis
313	4481	Somatostatin Receptor Type 2	Santa Cruz
315	4482	Somatostatin Receptor Type 3	Santa Cruz
317	4483	Somatostatin Receptor Type 4	Santa Cruz
319	4484	Somatostatin Receptor Type 5	Santa Cruz
321	4552	Tachykinin Receptor 1	Santa Cruz
323	4687	Thrombin Receptor	DPC Biermann/Acris
323	4687	Thrombin Receptor	Research Diagnostics
323	4687	Thrombin Receptor	Santa Cruz
325	4734	Thyrotropin Releasing Hormone Receptor	Santa Cruz
327	4944	Angiotensin II Type 1 Receptor	Alpha Diagnostic Int.
327	4944	Angiotensin II Type 1 Receptor	Biocarta
327	4944	Angiotensin II Type 1 Receptor	Biogenesis
327	4944	Angiotensin II Type 1 Receptor	Capralogics
327	4944	Angiotensin II Type 1 Receptor	Chemicon
327	4944	Angiotensin II Type 1 Receptor	DPC Biermann/Acris
327	4944	Angiotensin II Type 1 Receptor	Fitgerald Industries Int.
327	4944	Angiotensin II Type 1 Receptor	Fitzgerald Industries Int.
327	4944	Angiotensin II Type 1 Receptor	Lab Vision Corporation/NeoMarkers
327	4944	Angiotensin II Type 1 Receptor	Santa Cruz
329	4946	Angiotensin II Type 2 Receptor	Alpha Diagnostic Int.
329	4946	Angiotensin II Type 2 Receptor	DPC Biermann/Acris
329	4946	Angiotensin II Type 2 Receptor	Santa Cruz
331	5072	Pyrimidinergic Receptor P2Y4	Chemicon
333	5117	Vasopressin V1A Receptor	Chemicon
335	5118	Vasopressin V1B Receptor	Alpha Diagnostic Int.
335	5118	Vasopressin V1B Receptor	Chemicon
337	5119	Vasopressin V2 Receptor	Alpha Diagnostic Int.
337	5119	Vasopressin V2 Receptor	Chemicon
337	5119	Vasopressin V2 Receptor	Research Diagnostics
347	6031	SIV/HIV Receptor BONZO	Santa Cruz
349	6204	Lysophosphatidic Acid Receptor Edg4	Exalpha Biologicals
351	6213	C-C Chemokine Receptor 5	Calbiochem
351	6213	C-C Chemokine Receptor 5	Capralogics
351	6213	C-C Chemokine Receptor 5	Chemicon
351	6213	C-C Chemokine Receptor 5	Research Diagnostics
351	6213	C-C Chemokine Receptor 5	Santa Cruz
361	6853	Purinergic Receptor P2Y11	Zymed

365	7221	Galanin Receptor GalR2	Alpha Diagnostic Int.
367	7246	Orexin Receptor 1	Alpha Diagnostic Int.
369	7247	Orexin Receptor 2	Alpha Diagnostic Int.
371	8436	Platelet-Activating Factor Receptor	Cayman
371	8436	Platelet-Activating Factor Receptor	Santa Cruz
377	9421	Neuropeptide Y Receptor Type 1	Biogenesis
377	9421	Neuropeptide Y Receptor Type 1	DPC Biermann/Acris
379	9834	Corticotropin releasing factor Receptor 1	Research Diagnostics
379	9834	Corticotropin releasing factor Receptor 1	Santa Cruz
385	14198	Interleukin-8 Receptor B	Biosource
385	14198	Interleukin-8 Receptor B	R&D Systems
385	14198	Interleukin-8 Receptor B	Research Diagnostics
385	14198	Interleukin-8 Receptor B	Santa Cruz
387	14641	Calcitonin Receptor	Santa Cruz
389	16041	C-C Chemokine Receptor 6	Research Diagnostics
389	16041	C-C Chemokine Receptor 6	Santa Cruz
391	16599	Smoothened	Research Diagnostics
391	16599	Smoothened	Santa Cruz
397	17535	Gaba(b) Receptor 1	Alpha Diagnostic Int.
397	17535	Gaba(b) Receptor 1	Calbiochem
397	17535	Gaba(b) Receptor 1	Chemicon
397	17535	Gaba(b) Receptor 1	Santa Cruz
423	37498	Xenotropic and Polytropic Retrovirus Receptor (XPR1)	Santa Cruz
435	54053	Gaba(b) Receptor 2	Alpha Diagnostic Int.
435	54053	Gaba(b) Receptor 2	Chemicon
439	56923	Muscarinic acetylcholine Receptor M3	Biogenesis
439	56923	Muscarinic acetylcholine Receptor M3	Santa Cruz
457	152201	Thyrotropin Receptor	DPC Biermann/Acris
457	152201	Thyrotropin Receptor	Santa Cruz
459	152245	C-C Chemokine Receptor 2	Research Diagnostics
459	152245	C-C Chemokine Receptor 2	Santa Cruz
461	152299	Interleukin-8 Receptor A	Biosource
462	152299	Interleukin-8 Receptor A	Biosource
461	152299	Interleukin-8 Receptor A	R&D Systems
462	152299	Interleukin-8 Receptor A	R&D Systems
461	152299	Interleukin-8 Receptor A	Research Diagnostics
462	152299	Interleukin-8 Receptor A	Research Diagnostics
461	152299	Interleukin-8 Receptor A	Santa Cruz
462	152299	Interleukin-8 Receptor A	Santa Cruz
468	159973	Vasoactive Intestinal Polypeptide Receptor 1	Exalpha Biologicals
470	160040	Vasoactive Intestinal Polypeptide Receptor 2	Exalpha Biologicals
472	160055	Motilin Receptor (GPR38)	Santa Cruz

503	160228	T-Cell Death-Associated Gene 8 (GPR65)	Santa Cruz
507	160312	Sphingolipid Receptor Edg5	Exalpha Biologicals
515	160329	Proteinase-Activated Receptor 4	Santa Cruz
535	161214	Galanin Receptor GalR3	Alpha Diagnostic Int.
537	161221	Urotensin-II Receptor (GPR14)	Santa Cruz
546	177168	Cysteinyl Leukotriene CYSLT1 Receptor	Cayman
548	177191	Histamine H3 Receptor	Alpha Diagnostic Int.
548	177191	Histamine H3 Receptor	Chemicon
552	180956	Lysophosphatidic Acid Receptor Edg7	Exalpha Biologicals
562	189900	Sphingolipid Receptor Edg8	Exalpha Biologicals
628	190774	Histamine H4 Receptor	Alpha Diagnostic Int.
628	190774	Histamine H4 Receptor	Chemicon
636	190955	Leukotriene B4 Receptor BLT1	Cayman

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: ANTIGENIC PEPTIDES, SUCH AS FOR G PROTEIN-COUPLED RECEPTORS (GPCRS), ANTIBODIES THERETO, AND SYSTEMS FOR IDENTIFYING SUCH ANTIGENIC PEPTIDES

(57) Abstract: The present invention provides antigenic peptides for GPCRs and antibodies relating thereto, and related systems, methods, compositions, and the like, such as diagnostics and medicaments. Where antibodies against a given GPCR are not known, the present invention provides such antibodies, and preferred antigenic sequences for producing such antibodies. Where antibodies against a given GPCR are known, the present invention provides preferred antigenic peptides for producing antibodies that exhibit improved specificity, affinity or capacity to perform antibody-related actions relative to the known antibodies.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/50107

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N15/12 C07K14/705 C07K16/28 G01N33/53

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07K C12N G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EMBL, SEQUENCE SEARCH, EPO-Internal, WPI Data, BIOSIS, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ZHOU FENG C ET AL: "Production and characterization of an anti-serotonin 1A receptor antibody which detects functional 5-HT1A binding sites." MOLECULAR BRAIN RESEARCH, vol. 69, no. 2, 8 June 1999 (1999-06-08), pages 186-201, XP002222431 ISSN: 0169-328X figure 1; table 1 ---	1-10, 15-26

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[X] Further documents are listed in the continuation of box C.

[ ] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
6 January 2003	08. 04. 2003

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Bucka, A

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	RAYMOND JOHN R ET AL: "Immunohistochemical mapping of cellular and subcellular distribution of 5-HT-1A receptors in rat and human kidneys." AMERICAN JOURNAL OF PHYSIOLOGY, vol. 264, no. 1 PART 2, 1993, pages F9-F19, XP001127496 ISSN: 0002-9513 the whole document, in particular figures 1, 3 ---	1-10, 15-26
Y	VERDOT L ET AL: "PRODUCTION OF ANTI-PEPTIDE ANTIBODIES DIRECTED AGAINST THE FIRST AND THE SECOND EXTRACELLULAR LOOP OF THE HUMAN SEROTONIN 5-HT1A RECEPTOR" BIOCHIMIE, MASSON, PARIS, FR, vol. 76, no. 1, 1994, pages 165-170, XP008009332 ISSN: 0300-9084 the whole document ---	1-10, 15-26
Y	TODD E ANTHONY AND EFRAIAN C AZMITIA: "Molecular characterization of antipeptide antibodies against the 5-HT1A receptor: Evidence for state-dependent antibody binding." MOLECULAR BRAIN RESEARCH, vol. 50, no. 1-2, 15 October 1997 (1997-10-15), pages 277-284, XP002222432 ISSN: 0169-328X the whole document ---	1-10, 15-26
A	ECKARD C P ET AL: "CHARACTERISATION OF G-PROTEIN-COUPLED RECEPTORS BY ANTIBODIES" CURRENT MEDICINAL CHEMISTRY, BENTHAM SCIENCE PUBLISHERS BV, BE, vol. 7, no. 9, September 2000 (2000-09), pages 897-910, XP000984970 ISSN: 0929-8673 the whole document ---	1-10, 15-26
A	BACKSTROM JON R ET AL: "Generation of anti-peptide antibodies against serotonin 5-HT2A and 5-HT2C receptors." JOURNAL OF NEUROSCIENCE METHODS, vol. 77, no. 1, 7 November 1997 (1997-11-07), pages 109-117, XP002222433 ISSN: 0165-0270 the whole document ---	1-10, 15-26

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INTERNATIONAL SEARCH REPORT

Inte al Application No
PCT/US 01/50107

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EASON MARGARET G ET AL: "Identification of a G-s coupling domain in the amino terminus of the third intracellular loop of the alpha-2A-adrenergic receptor: Evidence for distinct structural determinants that confer G-s versus G-i coupling." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 42, 1995, pages 24753-24760, XP002222434 ISSN: 0021-9258 the whole document	1-10, 15-26

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 01/50107

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. [X] Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 19 and 20 are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

2. [ ] Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. [ ] Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. [ ] As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. [ ] As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. [ ] As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. [X] No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-10, 15-26 (all partially)

Remark on Protest

[ ] The additional search fees were accompanied by the applicant's protest.

[ ] No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

Invention 1: claims 1-10, 15-26, all partially

an isolated antigenic peptide having the amino acid sequence SEQ ID NO: 692, nucleic acids encoding said peptide, antibodies directed against said peptide, kits containing said antibodies

Inventions 2 to 1600: claims 1-26,
all partially and in so far as applicable

each separate, individual invention relates to an isolated antigenic peptide, nucleic acids encoding said peptide, antibodies directed against said peptide, kits containing said antibodies,
wherein invention 2 is represented by the peptide having the amino acid sequence SEQ ID NO: 693,
invention 3 is represented by the peptide having the amino acid sequence SEQ ID NO: 694,
continuing to invention 1600, which is represented by the peptide having the amino acid sequence SEQ ID NO: 2292

Invention 1601: claims 27-66

a method of identifying an amino acid sequence of an antigenic peptide derived from a candidate polypeptide, peptides identified by that method, antibodies directed against said peptides